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ABSTRACT

This publication, designed for a worldwide readership, contains articles, notes, and book reviews pertaining to educational theories and practices. While the body of the articles are in English, overviews are given in German and French. French and German books are reviewed in their native language; English and other language books are reviewed in English. Topics include: (1) equal education in South Africa; (2) preschool teacher training programs in problem solving; (3) student motivation and academic achievement; (4) a successful secondary school system in the Philippines; (5) educational revolution in Tanzania; (6) television viewing and violence; and (7) power and ideology in education. (CJ)

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AN EDUCATIONAL WAY AHEAD FOR SOUTH AFRICA?

EDMUND KING

The vast (and increasing) majority of the South African population are non-white, and suffer many disadvantages. Solutions for these must be sought by political, economic, and social transformations which the present regime will not allow. However, internal economic pressures (especially the shortage of skilled and intermediate personnel necessary for the modernisation and enlargement of present enterprises) show the need for a much larger and better educated non-white work-force. In certain sectors of industry in some parts of the country, non-white South Africans are extending their education and moving into apprenticeship or other training opportunities, especially where white intermediate specialists are moving out.

Less opposition is sometimes shown to the advancement of non-white personnel than previously, partly because industries and commerce welcome them, and partly because whites who in earlier times would have resented non-white competition are aspiring to other educational and social futures. However, the possibilities of acquiring "intermediate" education and training remain very difficult for non-whites (especially the black population) because of discrimination, very unequal provision and erratic distribution, and the poor supply of black teachers.

Much provision for the South African non-white population will probably have to be of a supplementary character. To that extent, the South African need for hasty reorientation both in technological and in general education becomes educationally *comparable to the need felt in well-schooled industrial countries for "post-compulsory" readjustments between schooling and industry, and for "second-chance" opportunities. Prospects for implementation in South Africa are considered against the long tradition of segregation and the division of administrative responsibilities in the educational system. South African problems are also considered for their wider relevance for the use of "post-compulsory" education in circumstances of rapid change, especially where educational provision has to be re-engaged for different social and economic needs.*

La grande majorité (croissante) de la population sud-africaine est constituée de non-blancs et souffre de nombreux désavantages. Les solutions doivent être recherchées par des transformations sociales, économiques et politiques que le régime actuel ne permet pas. Toutefois, les pressions économiques intérieures (plus particulièrement la pénurie de personnel qualifié et intermédiaire pour la modernisation et l'agrandissement des entreprises actuelles) montre la nécessité d'une force de travail non-blanche plus importante et mieux éduquée. Dans certains secteurs de l'industrie, et dans certaines parties du pays, les sud-africains non-blancs sont en train de développer leur éducation et entrent en apprentissage, ou profitent d'autres opportunités de formation, là surtout où les spécialistes intermédiaires blancs s'en vont.

International Review of Education – Internationale Zeitschrift für Erziehungswissenschaft – Revue Internationale de Pédagogie XXV (1979), 481-500. *All rights reserved. Copyright © 1979 by Unesco Institute for Education, Hamburg and Martinus Nijhoff, The Hague /Boston /London.*

La promotion du personnel non-blanc suscite parfois une opposition moindre que par le passé, en partie du fait que les industries et le commerce leur font bon accueil, mais aussi parce que les blancs qui, auparavant, auraient pris ombrage de la compétition des non-blancs, aspirent maintenant à un avenir social et éducatif différent. Toutefois les possibilités d'acquérir une éducation et une formation "intermédiaires" pour restent minimes les non-blancs (surtout pour la population noire) à cause de la discrimination, des prestations éducationnelles très inégales, de la distribution irrégulière, et du nombre restreint d'enseignants noirs.

La plus grande partie des prestations éducationnelles concernant la population sud-africaine non-blanche devra probablement revêtir un caractère complémentaire. A ce point, le besoin ressenti par l'Afrique du Sud d'une réorientation urgente, tant dans le domaine technologique que dans celui de l'éducation générale, est comparable, sur le plan de l'éducation, au besoin que les pays industriels bien scolarisés, ressentent d'une adaptation "post-obligatoire" entre l'établissement scolaire et l'industrie, et d'opportunités d'une "seconde chance". Les perspectives d'une mise en oeuvre de ces réformes en Afrique du Sud sont traitées, en tenant compte de la longue tradition de ségrégation, et de la division des responsabilités administratives dans le système de l'éducation. Les problèmes sud-africains méritent aussi d'être examinés parce que bien appropriés à d'autre situations où des changements rapides font sentir la nécessité de recourir à l'enseignement post-obligatoire, spécialement là où les prestations éducationnelles doivent être ré-engagées pour répondre à des besoins sociaux et économiques différents.

Die überwältigende (und noch ständig wachsende) Mehrheit der südafrikanischen Bevölkerung ist farbig und leidet unter vielen Nachteilen. Für diese müssen Lösungen gesucht werden durch politische, wirtschaftliche und soziale Umwandlungen, die das gegenwärtige Regime nicht zulässt. Interne wirtschaftliche Erfordernisse (insbesondere der Bedarf an Facharbeitern und mittlerem Personal für die Modernisierung und Ausdehnung bestehender Unternehmen) zeigen die Notwendigkeit einer viel umfangreicheren und besser ausgebildeten farbigen Arbeiterschaft auf. In gewissen Industriesektoren in einigen Teilen des Landes verlängern Farbige ihre Ausbildung, indem sie Lehrlings- oder andere Ausbildungsmöglichkeiten wahrnehmen, vor allem auf den Gebieten, von denen weisse mittlere Fachleute abwandern.

Dem Fortschritt farbigen Personals wird vielfach weniger Widerstand entgegengesetzt, als bisher der Fall war, teils weil Industrie und Handel mittlere Arbeitskräfte brauchen, teils weil die Weissen, die sich früher gegen eine farbige Konkurrenz gewandt hätten, jetzt einen anderen Bildungs- und Sozialstandard anstreben. Immerhin bleiben die Möglichkeiten für Farbige (besonders die Schwarzen) infolge von Diskriminierung, sehr ungleichem Ausbildungsangebot und ungleichmässiger Verteilung sowie dem Mangel an schwarzen Lehrern stark beschränkt.

Ein grosser Teil des Ausbildungsangebots für die farbige Bevölkerung Süd-Afrikas wird wahrscheinlich ergänzender Natur sein müssen. Insofern ist die Notwendigkeit für schnelle Umorientierung sowohl der technischen als auch der allgemeinen Bildung in Süd-Afrika vergleichbar mit der Bildungssituation in Industrieländern, die gut mit Schulen ausgestattet sind, in denen sich aber für die Zeit nach dem Schulpflichtalter ein Bedarf nach Neuausrichtung des Verhältnisses zwischen Schule und Industrie sowie nach "zweiten Chancen" spürbar bemerkbar macht. Die Aussichten für die Durchführung entsprechender Änderungen in Süd-Afrika werden gegen die lange Tradition von Segregation und administrativer Verantwortungsteilung im Bildungswesen abgewogen. Ferner werden die Probleme Süd-Afrikas auf ihre weitgehendere Relevanz für "Nach-Schul-Ausbildung" unter Verhältnissen schnellen Wandels hin untersucht, vor allem dort, wo das Bildungsangebot für verschiedene soziale und wirtschaftliche Notwendigkeiten in Anspruch genommen werden muss.

This paper attempts to consider whether the great majority of the population in South Africa – manifestly disadvantaged on so many counts – might win a chance of advancement because present circumstances actually demand an educational reorientation for economic reasons. South Africa's present context seems perilous to the white ruling class for political reasons, and also because of huge events in neighbouring countries which bring into question the military and trading balance which has been so profitable for South African whites during the past three decades. But even within South Africa itself, and without direct reference to the social and political reasons which ought to motivate a change in the whites' attitudes to the non-white population who comprise the great majority of the country's inhabitants, pressures are mounting in favour of extending educational and training facilities to non-white people – if only to safeguard future economic growth. Indeed, a few significant instances of change are detectable.

It is particularly interesting that South Africa's crisis of technological-and-educational reorientation is emerging at a time when all the highly industrialised countries (or urbanised centres) throughout the world are also having to reconsider the adequacy of their school and college systems by criteria now becoming obvious in the *post-compulsory phase* of education and training. Long-settled systems of education in the social democracies have failed to ensure "equality of educational opportunity" or "the right to education as and when needed" or "recurrent education/retraining" – or, indeed, most of the aims which seemed during the 1950s and 1960s to link educational expansion with improvements in social and political participation, not to speak of continued economic enrichment. At the present moment, when an obvious misfit between school-leaving and employment opportunities[1] has caused the 16-25 population to make up some 37% of all the unemployed in the European Economic Community, and when an accelerating shift in the pattern of all occupations is making Paid Educational Leave a necessary "topping-up" or reorientation for many thousands of workers in all industrialised countries, the South African crisis seems capable of being considered (at least partly) in educational terms of wide importance outside South Africa itself.

On the other hand, South African educational and social problems are so acute, and so deeply entrenched in all those local peculiarities which the world rightly condemns, that some justification for my writing about them seems called for. Justification may be offered on two grounds. First, I was invited by South Africans to introduce the Education Section of a major international conference at Grahamstown during 1978 (dealing with "The Road Ahead") with a lecture on "Problems of education and development in

a plural society". That invitation came from the 1820 Settlers National Monument Foundation, at the suggestion of Professor W.M. Kgware, a black South African who is Rector of the segregated University of the North, and a specialist in Comparative Education. The second justification, which accounted for Professor Kgware's recommendation, is to be found in the international investigation of post-compulsory education which I undertook as Director of the Comparative Research Unit at King's College, London. In that investigation, many problems of "Education for Uncertainty"[2] or readjusting education to rapid social and technological change were documented and analysed.

However, in the special circumstances of South Africa it seemed necessary to consider whether an acceptance might be misinterpreted (indeed, perhaps misused), and whether it might do harm to anyone. I also wondered if it would be possible to speak freely and to make the contacts necessary for true appraisal of the problem on the ground. In retrospect I can say I had a month-long opportunity to speak to South Africans of every type and every opinion in most parts of the country – far beyond the expectation or awareness of the Ministry officials who smoothed my path. Interviews ranged from a 40-minute conference with the Minister of National Education (at his invitation) to talks of about the same length with persons under official "restraint". It is widely known that such people are subjected not only to visitation and scrutiny by the Bureau of State Security (BOSS) but even to occasional pot-shots by over-enthusiastic citizens. I saw first-hand evidence of that. Moreover, the British Embassy in Pretoria was similarly shot at soon after my wife and I were there. Yet, to avoid misunderstanding, I must say that among Afrikaners too I met great kindness, liberalism, and sympathy for what I might advocate – as well as closed minds and relentless fanaticism.

The Special Circumstances of South African Educational Reorientation

It seems best to begin with details of a circumstantial kind, to make any discussion realistic, and also to take account of Michael Sadler's important advice:

> "In studying foreign systems of education we should nor forget that the things outside the schools matter even more than the things inside the schools, and govern and interpet the things inside ... A national system of education is a living thing, the outcome of forgotten struggles and difficulties and of battles long ago. It has in it some of the secret workings of national life. It reflects, while seeking to remedy, the failings of national character. ... The practical value of studying in the right spirit and with scholarly accuracy the working of foreign systems of education is that it will result in our being better fitted to study and understand our own".

Let us therefore appraise the setting of education in South Africa. Amidst huge differences of terrain, climate, languages, and culture – and also of degrees of agricultural and industrial development – the four provinces are in principle responsible for primary and secondary education. However, that means the education of *white* people; and even that responsibility is subject to strict supervision on all important matters of principle by the Ministry of National Education (i.e. white education) in Pretoria. Higher education is under *national* control. So are vocational and technical education, and everything that concerns non-white people. Those two sectors each have their own national ministries (of Education and Training, and of Plural Development) which are both minutely regulated by the majority Nationalist party in Parliament.

The four main urban areas include about 30% of the population; but these and other urban areas are expanding very fast as industries develop apace. They already produce about 70% of the gross national product. Consequently, the South African economy is moving quickly from reliance on agriculture and other primary products, or even on natural resources such as gold and diamonds and uranium, towards those of an industrialised or even a "post-industrial" state. It is often said in South Africa that the country represents distinct aspects of a pre-industrial, developing, developed, and hyper-urban society. Each aspect is to a marked extent reflected in educational provision and need – and also in the population characterising each phase.

The population is growing very quickly – now doubling every 30 years, according to Sir Colin Buchanan's figures quoted at Grahamstown; that roughly equates with the increase of mankind as a whole, whereas in urban Western Europe there is now no significant population increase, if any. Some 1978 approximate figures are of interest (from Professor J.L. Sadie of Stellenbosch University):

	(1978)	% of pop.	Annual increase
Blacks (excluding "foreign born" i.e. temporary workers)	19.5 m	71.5%	2.9%
Whites	4.4 m	16.2%	1.0%
Coloured	2.6 m	9.4%	2.3%
Asians	0.8 m	2.9%	2.3%
TOTAL	27.2 m		2.5%

Approximately 40% of the white population is English-speaking, and about 60% is Afrikaans-speaking. Of the latter, many were originally of French-speaking Huguenot stock but have been completely assimilated with the Dutch settlers; a small proportion are more recently of German-speaking (S.W. African) stock, but earlier German-speaking immigrants have also been absorbed. The great majority of the Coloured population speak Afrikaans; most Indians speak English.

Before the recent development of "independent" "homelands", some 15% of the land (usually the least fertile) was in African hands; the remaining 85% is owned by white South Africans, with few exceptions. The "homelands" (e.g. Transkei and Bophuthatswana) are territories designated for exclusive African control, and are taken out of the 15% of land just mentioned. Bophuthatswana and other "homelands" still in the making are each composed of an "archipelago" of defined districts where a tribe speaking mainly one language is in principle assigned for local citizenship under the Apartheid legislation. It is officially stated (e.g. by Dr. C. Mulder when Minister for Plural Development in 1978) that in due course *all* black people will be so assigned to demarcated "homelands", of which alone they will be citizens enjoying local autonomy. Then whites will be the only citizens of a reorganised "South Africa". Any black or other non-white people will be "temporary" guest-workers, admitted as required by permit. By 2000 A.D. the plan is to have 60% of the then 40m blacks in "homelands"; now 16m blacks are in "white areas".

No "homeland" has been recognised internationally. No "homeland" is economically viable. All are entirely dependent on the South African economy, to which they supply the cheap and semi-skilled or unskilled labour necessary for the present occupational system. At present, 12m blacks serve inner-city areas – mostly on a daily basis. Much black labour is also recruited from other African countries peripheral to South Africa, whose economies depend upon remittances sent back home. Indeed, not only the "homelands" recently designated but a large part of the countryside within South Africa, and all those "townships" for segregated black or Asian or Coloured populations set up officially on the outskirts of "white" towns and cities, supply a constant flow of mainly unskilled labour for the maintenance of South African industries and homes. During the day-time absence of all those black men and able-bodied women in the white towns, black children in "townships", "homelands", and elsewhere are in the care of elders – with no compulsory education before 1979 announcements, and little even then (and that may have to be paid for), no social services, not even cold water in many homes and electricity in far fewer, with no proper

counting of heads to ascertain needs. Yet it is known that in Soweto – the main black suburban township on which Johannesburg ten miles away utterly depends for labour – there are over 1 million inhabitants.

It is thus important to see the "townships", "homelands" and other non-white areas of South Africa as reservoirs of uneducated labour. At Grahamstown, Professor J.L. Sadie spoke of having "neither the basic human material nor encouraging backgrounds" in South Africa's "less developed communities (LDCs)" and of "deficient human material" made worse by early and repeated pregnancies which resulted in early backwardness of children because of lack of material care. All this reduced the chances of developing talent. Such non-white LDCs paid few if any taxes, and could not expect much education since "he who pays the piper calls the tune". Such remarks, though quite typical of the Afrikaners' general stance, were most untypical of opinions expressed at Grahamstown; but they help to explain the following figures for male workers of all races:

Executives and decision-makers	3.4%
Technicians and highly skilled	8.2%
Less skilled	33.9%
Unskilled, unemployed etc.	about 55.0%

As for the reservoir of Africans, it is worth noting that, although their mother-tongue is nearly always one of nine major local languages, those who obtain employment in white homes and workshops must learn not only one or more Bantu languages to deal with each other but also the white man's *two* languages. Another point to observe is the differential rate of increase. If that stays as now, with present patterns of employment, by the year 2000 the relative proportions of the occupational groups listed above will be: 1, 6, 53 and 117. If the segregation of the various population groups into distinct "homelands", townships, and other areas were to continue, then clearly some would consist quite disproportionately of the lowest categories of workers (or unemployed), while the much larger and more fertile lands of a small white population would be even richer and more luxurious still. Even now, over 20% of the population are stated to be in "under-employment" poverty; employment itself is badly paid.

I leave aside all the moral and international implications of such calculations, and will return later to the question of educating and training people for a different economic and social order. Just now it is important to observe how overwhelmingly the present system of things is supported – indeed, powerfully enforced – by the government, whose National Party has

enjoyed a crushing majority for over 30 years on a white suffrage. In the House of Assembly the National Party has 133 seats out of 165, and 40 out of 51 seats in the Senate (1979). Hence every official calculation presupposes the continuance of the present dispensation, and on the supply of an apparently illimitable labour force. Indeed, those who would like to change the socioeconomic order and the educational hierarchies from which it seems inseparable must sternly face the possible consequences of dispensing with the labour-intensive economy of the present in any moves towards the highly trained service occupations which now engage roughly half the work-force in North-West Europe and Japan, and considerably more in North America. Merely opening up equal employment opportunities to Coloureds, Indians, and blacks in South Africa would double or treble the cost of living for whites (bringing it to Western European levels). The prospect of changes caused by microprocessing and all that is barely tolerable – or imaginable. It seems better, or safer, to concentrate on immediately recognisable possibilities, and on realistic limitations.

The Afrikaners' Position

The 60% of white South Africans whose mother-tongue is Afrikaans are in a very special cultural position. Their language is spoken only in South Africa. It is not Dutch, but a Dutch-based amalgam of mainly European tongues which became official only in 1914. It must be the only language with an official monument to itself (on Paarl Rock); but in the branches of the Dutch Reformed Church, in Voortrekker monuments and rituals, in the Women's Memorial at Bloemfontein to the 26,370 women and children who died in British concentration camps or elsewhere as a result of the "scorched earth" campaign in the Anglo-Boer War, there are incessant and insistent reminders of the Afrikaner's "siege situation" and "laager mentality" – not only as enshrined in Afrikaans literature and language but throughout the teaching of history even in English-language schools.

Schools, even so, are but the expression of the Afrikaner-dominated cultural totality. A television service was first started in 1976 (previously excluded to preserve cultural purity). Since then it has been universal and technically of excellent quality; but news and comment are trivialised and parochial, expressing only the views of government and spokesmen for the present economy. English-language newspapers are outspoken, and full of news and comment with wide coverage, much of it strongly critical of the government. That is why in late 1978 there was a "Muldergate" scandal (in

Afrikaans, "Muldersdrift") about the attempted takeover *with government money* of English-language newspapers to make them the mouthpiece of the National Party's policy. About that, many Afrikaners remained convinced that the manoeuvre itself was right, since the national policy was right, just as South Africa and its special interpretation of Christianity in the Dutch Reformed Churches are right.

Though South African history is one (in part) of separatist Boer republics, present Afrikaner South Africa is a phalanx of defensive self-righteousness. Its strongholds and outworks are jealously invigilated at every point by the secret Broederbond, to which almost all cabinet ministers and the great majority of leading officials everywhere belong. [For a conspectus see E.G. Malherbe: *Education in South Africa, Vol. 2, Appendix I* (Juta, 1977), where that loyal and distinguished South African scholar does not hesitate to indicate it as a "Gestapo" (Diagram 74)]. This kind of penetration is universal at the highest level in Afrikaans institutions; but it is also marked in English-language institutions controlled by government, such as schools.

Though loyally South African, English-speaking professors and newspapers make plain their criticism of social and educational policies, it is at their peril. After an appeal for moderation and co-operation between whites in tackling problems for the future, one notable scholar was subjected to cascades of "unspeakable abuse" by telephone, and even threatened with death – as a letter shows. Journalists and lesser fry, especially those in educational or socially ameliorative organisations, can be silenced by a banning order. No reasons are given, but the banning may last for five years. It confines the banned person to his home town, removes his passport, and prevents employment in education or publicity or factories; it also embargoes meetings and severely restricts potential visitors; it subjects its victims to police raids without warning and the scrutiny and unexplained removal of any papers. In all these circumstances it is quite astonishing that campaigns for racial equality, for the education of the disadvantaged, and for any educational reorientation of any kind can be maintained at all. Yet – not least in the English-speaking universities – they are nobly championed.

The Shortage of Educational Opportunity – and of Necessary Skills.

As far as formal education goes, an idea of present disparities can be gained from the Minister of National Education's statement to me that to provide equal opportunities for all races would require four or five times the current educational budget. White South Africans must stay at school until they are

16; in fact, about two-thirds of those who start secondary school stay until they are 18, and university entry is wide open after that since matriculation by world standards is easy. Yet until this year, schooling was not compulsory for black children and may have to be paid for; while of those actually enrolling in the lowest class (Sub-standard A) about 3.4% reached their top class (Form V) at the latest count (1977), less than half reached the class appropriate to six years of schooling, and only 13.7% reached Form I (the first real secondary class in the black system).

Teacher: pupil ratios overall in black schools were 1: 52, though some schools had 1: 70 – as against 1: 20 in white schools, 1: 30 in Coloured schools, and 1: 27 for Asians. Black children overall had 68,000 teachers for all purposes – of whom only 1,143 had a university degree and training, and only 6,488 had training following matriculation or equivalent. (The corresponding teacher supply for a much smaller white child population was 12,938 trained graduates, and 28,394 trained after matriculation at about 18). Educational expenditure on whites per head in 1975 was 15.7 times greater than for blacks – itself an improvement on an almost twenty-fold disproportion in 1968. Put in other words, each white child had 644 Rand spent on him, while the average black child had 41 Rand. (These figures exclude all "homelands", for which details are not available).

Some black spokesmen say these statistics are optimistic, anyway; but in any case it is clear that some areas are more disadvantaged than others. Soweto, for example, has had a remarkable face-lift since the riots in 1976 when more than 500 black secondary school teachers resigned and there was an almost complete boycott of examinations by their pupils; but in 1978 there were just over 30 secondary schools for the many children of well over a million inhabitants, while in the whole of Cape Province there were said to be under 10 high schools for blacks.

Where and how can a move be made, and what can bring it about? The paper by Professor Sadie referred to above gives not a glimmer, since – like many South African pronouncements – it looks to the importation of higher skills from abroad. (At present, however, the country loses as many skilled or educated personnel by voluntary emigration to North America and Australia as it imports; and because of the widespread feeling that "there isn't much time left", that exodus may accelerate). Nonetheless, the tremendous shock of the educational events at Soweto in 1976 and their repercussions throughout the whole country may give a clue, though some black spokesmen say that for them "Education died in 1976". For whatever reason, the representatives of the Ministries of Plural Development (formerly Bantu Affairs) and of (non-white) Education and Training now point

to innovations that would recently have been unthinkable; these are most significant in the fields of technical education where there is the greatest single shortage of adequately equipped personnel, but are also noteworthy in commercial and general studies at what in Britain would be recognisable as OND, HND, or perhaps BEC and TEC levels.

Soweto, for example, has a very new Technical High School – with a severely competitive entry and close control even over the parents of pupils who gain admission at any age from 13 to 18 or even older. "In spite of job reservation" there is also an Industrial Training Centre on a different site which is claimed to be the first electronics training centre (for blacks) in the whole country. 40 highly selected boys and girls whose previous school career has been exemplary receive both an adaptively pre-technological and a vocationally specific education for electronic occupations; in addition to six "normal" subjects for matriculation they take a seventh which can win them a National Certificate in this field. The equipment used includes some highly sophisticated gear imported from the USA and Germany; other apparatus is constructed by staff and students together. To a lesser extent, black teachers in service can also be trained at this centre in related fields.

This highly exceptional innovation – obviously a showplace – is worth a special mention because of what may be a radical change of principle: the admission of *blacks* to an intermediate range of "subgraduate" skills and the associated "polyvalent" learning. In automobile workshops and a number of industrial or maintenance jobs this kind of skill-acquisition has been going on *de facto* for years, even though the supervisors or enterprise proprietors have often been less competent whites. The fact that such innovations are proclaimed, and for this sector of the population, is the significant point.

The very large Coloured population (mainly of mixed European-Hottentot descent) has long aspired to "the white man's" education. Especially in and around Cape Town and the Western Cape, but to a notable extent elsewhere, Coloured people have become prominent in commerce, construction, and middle-range occupations as well as some learned professions. Had it not been for the purely artificial segregation now imposed on their housing and higher education, many of them would doubtless have filtered through all the hierarchies of learning and occupation on a much larger scale than now. Many Coloured people look "European" or "Mediterranean"; but the harshness of their treatment has closed ranks and made a large number of their spokesmen identify themselves as "blacks" rather than simply a "non-white" group in a pecking-order of complexions. The "Coloured" University of the Western Cape (1970) has very capacious provision – aggressively new – for an enrolment of nearly 2,800 in 1978,

expected to reach 5,000 in a decade or so. However, many able Coloured students would much prefer to enter white universities like Cape Town and Witwatersrand (whose constitutions forbid discrimination and which despite Apartheid do admit some non-whites, although in principle such admissions are restricted to courses not provided by non-white higher education). It is understandable that a demand for education "just the same as the whites'" should be vocal among this group.

On the other hand the Asian group, predominantly found in Natal and recently provided with their own university on the outskirts of Durban, have long been prominent in commerce and many intermediate service occupations. Technical education for them has been much publicised by the South African government. Most Indians are eager to send their children to school and keep them there, though they must pay for it. 95% of initial enrolments complete elementary school to Standard 3, 64% stay to 16, and 25% to 18 (1976). Consequently, it was a rather formal decision recently to initiate 6 years of compulsory education for Indians, and to start before long on applying compulsion to Coloured people. Until 1979 no compulsory attendance for black children had been envisaged.

Educational Prerequisites for Social and Technological Change

For social and educational improvement in South Africa, some things stand out as obvious necessities. Schooling must be compulsory for all, despite the colossal expense and the barely imaginable transformation called for. Spokesmen for all the non-white communities varied greatly in their detailed recommendations about its content ("white"-style or not?), its phasing and extent, its links with life and work (traditional, transitional, urban, socio-political, or what?), and its location; but no one disagreed about its necessity and its quality. Yet even the best schooling is far from being the whole of education; so social improvements, education and help for women (the main hope for Africans, perhaps), and also adult education as and when people become ready for instruction or guidance – these are conditions for the success of any universal primary education. Access to jobs and especially promotion is bound to be a major problem of politics as well as economics; but the educational perspective must surely include provision for a whole series of access-points – and for returning, according to need and motivation.

This brings us very close to the rapidly changing frontier for education and training in Western Europe, to what I have called elsewhere the

"take-up zone from 16 to 'diploma'-level". Structural changes in all employment, the onset of youth unemployment, not to speak of the consequences of exploiting microelectronic automation, all make a nonsense of our previous thoughts about any juvenile preparation supposed to last life long.[1] We all need education for uncertainty,[2] for the varied but complementary development of our own experience whose plurality is essential for tomorrow's "communications society"[3]. What applies to us all applies with doubled force to the South African situation: there the disparities are immense already; the cataclysm of reordering society and the economy will overwhelm any previous educational prescription; and – apart from anything else – the task of re-engaging South Africa's life with that of the whole external world is manifestly one for recurrent, interactive education. Among colleagues throughout the whole of my stay in South Africa, and in public lectures too, I found a most sympathetic welcome for this new dimension of "post-compulsory education".

Nor is the notion new in South Africa. The South African Council for Higher Education (SACHED) is a rather small enterprise in Johannesburg; but, alongside the South African Institute of Race Relations in the same city, the Domestic Workers' Education Programme and a multiplicity of small-scale activities, it aims at providing the least-educated with the "fresh start" or "topping-up" opportunities they need for self-development. Their influence extends across the whole country, not so much as "pressure", but more for perceptible attention to migrant labour and an emphasis on constant development. Cumulatively, the goodwill of the liberal-minded and the realistic calculations of planners are thus being brought towards a common focus. That is, on supplementary or diversifying education for every section of South Africa's population – much of it to be received and contributed on the "young adult" frontier.[4]

In nearly all countries there is less objection to the mixing of students of every sort at this attainment- and age-level. Furthermore, the "young adult" level of attainment (as distinct from a particular age-range) now has to be catered for in special ways right across the world. People from every type of school and home background – and also those returning to formal instruction after varying periods away from it in every kind of life- and work-experience – are accommodated in a varied but recognisably similar band of *post-compulsory education*,[5] beyond school but at attainment-levels lower than academic or professional higher education.

The post-compulsory span includes (for example) Britain's "sixth form colleges" and tertiary colleges, the "colleges" now provided at sub-university level in other Western European countries, and still more the existing or

projected "short-cycle" or "two-tier" or "open" post-secondary education which seems to serve newly recognised needs all round the world. In the 1960s some such innovations were still thought of primarily as stepping-stones or "second paths" to universities or to long-familiar careers; but the upheavals of the 1970s and the approach of the micro-processing and communications revolutions have indicated a far more significant and universal responsibility for post-compulsory education at the attainment-level just referred to. That is, the preparation or reorientation of *any* kind of adult for an ever-changing future – at "young adult" levels of learning.

Of course, there are reasons within education itself why post-compulsory education with more attention to "young adult" needs and styles should have become so central to educational decisions of every kind; but the essentially *provisional* nature of much education and training at this level, and the *conditional* status of the "frontier" skills thus acquired (since they must be re-applied throughout life in an unforeseeable range of contacts), make it all the more necessary to recognise the "young adult" level of learning as a universal re-engagement area for nearly everyone sooner or later. In countries undergoing rapid transformations this level of re-entry is of outstanding significance. It offers direct yet multi-purpose facilities for personal "topping-up", for occupational reorientation, for hitherto neglected populations.

In South Africa's special dilemmas there are both general and specific reasons why post-compulsory education (as understood elsewhere) should be specially significant – obviously for "non-whites", but also for whites too. A general reason for its importance can be found in the present split of administrative responsibilities between the central government and the provinces, and between the provision for "general education" and training proper. That split leaves some of the most formative opportunities and needs uncatered for – even for whites. That is one reason why Dr. P.G.J. Koornhof, when he was still Minister for National Education in 1978, voiced the need for more rational coordination of the types of education provided. That is a worsening problem everywhere throughout the world at this level; but in South Africa's troubled circumstances Dr. Koornhof was more criticised than usual for "over-centralisation". Apart from the wish to hold on to provincial prerogatives, and to keep "separate facilities" still segregated, there is a prevalent delusion that South Africa itself can remain an oasis apart.

Yet I have already pointed to reasons why the frequently expressed need for a much larger South African work-force equipped with intermediate skills necessarily points to change – and change in the direction of

post-compulsory education and training for economic reasons alone, quite apart from development towards an effectively plural society. In the complex of needs and opportunities, South Africa has many specific pointers to this attainment-level as a possible way out of many difficulties. The "show-piece" example of technical instruction at Soweto may (in this perspective) be more widely influential than was intended. After all, government publicity has for some time been pointing to excellent facilities for Indians' technical education and training in Natal; and even if this is still perhaps less than typical for the province – let alone South Africa as a whole – it has been examined for wider policy implications in an excellent article by John Gibson of Durban Technical College.[6]

Visible Examples in the Perspective of Change

Looking at Coloured and White apprentices' training in Durban, Gibson shows clear indications of non-whites moving steadily into formerly "white" apprenticeships – as more are needed, while whites move out. For reasons of occupational need, and also for economy in premises, equipment, and teaching resources, "open admission for all" might widely expand from "multiracial technical education starting perhaps in the Durban area". The basic 1922 Apprenticeship Act made no mention of race or colour since it did not envisage that non-whites might move into apprenticeships; consequently "the provisions of the original Act could, by the 1970s, meet even the most liberal and progressive of international political and industrial standards".

This special case can be paralleled elsewhere, not least where white exclusiveness ceases to be so fierce – as in the case of decreasingly popular apprenticeships or other kinds of vocational/technical training. (In 1977, Indians from Durban made up 20.7% of the national total of entries for the Radio and Television Mechanics examination; but there were no white candidates in Durban.) Nevertheless, as we saw above, South African economists and leading industrialists emphasise the widespread need for this level of sub-graduate competence, and some industrial leaders at least are sympathetic to recruitment from non-whites.

Many non-white spokesmen resent the idea of being fobbed off with a "second best" alternative to the white man's universities. However understandable that resentment may be, it should be weighed against a growing realisation that even the whites' "general" education no longer meets South Africa's requirements in any contemporary sense. Western European coun-

tries with a long tradition of hegemony for both the "liberally" educated and the theoretically prepared technologists have lately been shifting their educational emphasis for those groups in the direction of greater practicality, and have also been paying vastly more attention to a "permeable pyramid" of learning/training and life-experience at repeated levels as the centrepiece of educational policy. There is no reason why the necessary forward spurt in South Africa (or other countries in a hurry to make up for the injustices and incompetence of a "grandee" style for the privileged) should follow the mistakes of a European past. It could come forward with advantage to the present day's technological realities and resources. Politically, such a decision would be difficult for South Africa; but in the last resort (short of insurrection) the industrialists and businessmen hold the power of persuasion.

Gibson's article just quoted makes two further important points: first, that in-service rather than initial preparation for the latest occupational skills is already growing and will become more typical; and secondly, that as Indians and Coloured people become more selective in the employments available to them, black Africans may well make inroads into many of the skilled trades on a national scale. These two points taken together indicate the possibility – if not likelihood in the long run – of providing intensive in-service training on a multiracial basis, especially where scarce resources may have to be engaged.

A Second-rate Opportunity – or an Internationally Relevant Model?

Though blacks, especially in the South African situation, might justly fear that acceptance of any such work-linked learning would condemn them to helotry, that risk should be weighed *for the time being* against three other considerations: (a) at the moment most of their children do not get any decent education, and they are desperately short of the schools and qualified teachers which they might get if industrialists could be induced to co-operate in a South African scheme resembling in some ways the Brazilian SENAI or MOPAL; (b) they might individually and together win more economic power; (c) they might be readier to run (or share in running) South African enterprises when the time comes.

Without prejudice to these possibilities in connection with occupational training, it is well to point to more "academic" possibilities of educational and social improvements for non-whites, again on the basis of existing provision. The University of South Africa is the most conspicuous example.

Its broadcast courses, backed up by books and postal tuition, antedated the Open University in Britain by several years and served as an example for those setting up the OU and several other "distance" learning innovations. In 1977, 46,714 students were registered; of these, 6320 were blacks, 3,576 were Indians, and 2,702 were Coloured. Of the blacks who have reached positions of educational responsibility in their own community a large number obtained their degrees in this way. A further possibility of extending lower-than-university education (at upper-secondary or post-secondary levels) has been discussed by those seeking to remedy present shortcomings, though not with official support. Nevertheless, the example of the University of South Africa (UNISA) is there, like the School of the Air in Australia, the Open University in Britain, and well established counterparts in the USA. *Telescuola* in Italy and "community education" in the West Indies show how this kind of "open school" can promote the education of the less privileged. An "open college" is only the next stage.

Though such "second chance" facilities as UNISA and the Open University often waive the usual requirements for admission, there remains a very real need to provide would-be entrants with a substantive foundation for advanced education, quite apart from matriculation formalities. If this has been found necessary in Britain and other countries with a good spread of education at the secondary or pre-university level, how much more must that need prevail among the non-whites in South Africa?

In the 1920s Dr. E.G. Malherbe conducted a Carnegie-sponsored survey of "poor whites" in South Africa (then mostly Afrikaners). He found that category confined to those who had not received education beyond Standard 6 (the level appropriate to age 13–14). Yet, in an even more competitive job-market biassed against blacks over 50 years later, there is a marked falling-off of black pupils at that very point. White pupils are in compulsory school at that age; blacks are not. More than half of the *already diminished* black proportion staying on until Standard 6 do not move on to *begin* Form I of the secondary stage. Of those who do, not more than half will proceed beyond Form III (appropriate to age 16, if there is no delay or "repeating"). Only one-tenth of them will continue until the top Form V, representing only 0.2% of *all enrolled* black pupils. (The corresponding proportion for whites in the top class is 4.9% of all white enrolments). It is obvious, therefore, that a huge backlog of educational disadvantage must be removed before the blacks can have effective access even to "post-compulsory" levels as those are understood by white people. As things stand, many black African pupils are already over-age for the elementary and secondary classes in which they are enrolled.

Consequently, liberal administrators of white universities are especially concerned about how to open university access to all races as soon as political conditions permit, and yet to preserve proper university standards – most obviously in science, technology, medicine, etc. Much thought is being given to the possible provision of a "college" layer of opportunity at the university threshold (by whom, remains a potent question), and – if necessary or appropriate – to facilitate the passage of very untraditional students through the university by untraditional methods, though again without prejudice to university integrity. The "unitisation" of study programmes, the acceptance of different paces and attainment profiles in one and the same student, and additional provision of supplementation as and when necessary – all these expedients are already being discussed in the context of South African universities' future, as they are in "further" and post-compulsory education in Britain. At the same time, the stage-by-stage prospect of two-tier qualifications, of diplomas cumulatively leading to genuine graduation, and of combining initial instruction for these newcomers with in-service reorientation for white "returners" have also been reviewed.

General Questions Arising from Post-compulsory Education

That is why the problems and potential of post-compulsory experimentation in Britain and other Western European countries seem so important for South African discussions of development along the new frontiers of higher education. These in turn might also present fresh ideas or working models for higher education's extension in many other contexts – especially in "Third World" countries where it seems imperative to avoid the time-consuming, expensive, and under-productive university education of so many rich countries hitherto.

The updating and reorientation of teaching in all communities is an obvious consequence to be looked for.[7] Alert and liberal South Africans are realistic in facing this need – in principle; but it will be some time before political conditions permit practical implementation. On the other hand, just as in other countries *all* students are "new" in important respects at post-compulsory and higher education levels, and therefore require to be served by a quite altered dispensation of teaching and learning opportunities, so the discussions which now perplex progressive South Africans can be seen as an integral part of a much wider review which embraces all "young adult" learning and "older adult" relearning.

Manifestly, some societies are more "plural" than others; but all are

plural and unevenly educated in ways not previously acknowledged. The inclusion in the educational enterprise of hitherto under-represented populations, studies, interests and applications – not to mention different occasion and styles for learning – is a painful but urgently pursued objective everywhere in advanced countries. For these, at least, the micro-electronic way ahead is not only thinkable but imminent – especially where there is a dearth of resources and competences for tasks so far left out of reckoning. As an aid – not as a main resource – that perspective seems technically possible for South Africa too.

Far more difficult than the practical problems of re-engaging an educational *system* for new purposes is the problem of securing the right attitude. Even in far more egalitarian countries than South Africa it has been difficult to win acceptance of complementariness and interdependence. Most educational and social prescriptions have been based upon an assumption that one way is right or best, or that there is a firmly fixed hierarchy of insights and values. The challenge of pluralism in culture, social relations, and political decisions is peculiarly difficult in South Africa – some would say, impossible. But that is no reason for not thinking now and henceforward of every possible educational way ahead.

NOTES

1. This problem has been widely discussed in recent years – notably (for example) in: *OECD Observer*, No. 95, November 1978; *Le Nouvel Observateur* of 4 December 1978 in two articles entitled "L'âge d'or du chômage" and "Voulez-vous vivre sans travailler?"; and in E.J. King (ed.): *Reorganizing Education – Management and participation for change* (Sage, 1977).

2. See E.J. King (ed.): *Education for uncertainty* (Sage, 1979).

3. The phrase "communications society" was given prominence by Johan Galtung in his paper in *OECD: Reviews of National Policies for Education – Japan* (1971). See also my chapter on "Education for a communications society" in *Reorganizing education*, op. cit. Daniel Bell has pointed out that communications are already the dominant industry in the U.S.A.; see *The cultural contradictions of capitalism* (1976). Some educational implications are highlighted in the following articles: "Microelectronics", *The Times* (2.10.1978); "Throw away the books", *Guardian* (10.1.1978); *Observer* (23.10.1978), page 40; and "Information in the next decade", *Times Educational Supplement* (28.4.1978). See also my *Other schools and ours*, 5th edn. (1979), pages 42-46.

4. See my chapter on "Post-compulsory education: The frontier of uncertainty" in *Education for uncertainty*, op. cit.

5. See E.J. King, C.H. Moor and J.A. Mundy: *Post-compulsory education II – The way ahead* (1975), especially Chapter 4. Also: *Education 16-19: Hopes, problems and prospects* (Council of Europe, 1979) and W. Mitter: "Sekundarbereich II – Abschluss der Jugendschule oder Beginn der Erwachsenenbildung" in *Bildung und Erziehung*, Vol. 31, No. 6, December 1978.

6. John Gibson: "Technical education at the secondary level in Durban, 1968-1976: some trends toward open admission for all", in *Journal of Education* (University of Natal Vol. 10, July 1978).

7. Much attention is currently being given to this problem, notably at the University of the Witwatersrand in Johannesburg. See also an excellent article by Jack Niven, Professor of Education at the University of Natal in Pietermaritzburg, in *Journal of Education* (University of Natal, Vol. 10, July 1978).

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BEHAVIOUR THEORY IN THE NURSERY SCHOOL: PROBLEM SOLVING AND TEACHER TRAINING

BERND BECKER, HANS HILLMEIER, GÜNTER REISBECK and HANS STROHNER*

The present study reports an attempt to develop a training programme for nursery school teachers with reference to new developments in behaviour theory. The underlying aim of the training programme is to develop a general problem-solving strategy simple and flexible enough to be used in new problem situations in the four social fields of teacher-child interactions, teacher-teacher interactions, teacher-parent interactions, and the interactions between nursery school and community. The problem-solving strategy is a behavioural sequence which consists of the following stages: problem analysis, selection of goals, selection of modification procedures, application of modification procedures, and evaluation. The training of teachers to solve social problems in the nursery school can also be structured by means of these five steps. The training programme has been developed in close cooperation with the teachers of a nursery school. Some experiences concerning this cooperation and the application of the problem-solving paradigm are discussed.

Diese Studie berichtet über einen Versuch, ein Ausbildungsprogramm für Erzieher im Hinblick auf die Entwicklungen in der Verhaltenstheorie zu konstruieren. Dem Ausbildungsprogramm liegt die Absicht zugrunde, eine allgemeine Problemlösungs-Strategie zu entwickeln, die einfach und flexibel genug ist, um in neuen Problemsituationen auf den sozialen Gebieten der Erzieher-Kind, Erzieher-Erzieher und Erzieher-Eltern Beziehungen sowie auf dem der Beziehungen zwischen Kindergarten und Gemeinschaft angewandt werden zu können. Die Problemlösungs-Strategie ist eine Verhaltensfolge und besteht aus den folgenden Phasen: Problemanalyse, Auswahl von Zielen, Auswahl von Abänderungsverfahren, Anwendung der Abänderungsverfahren und Evaluation. Gemäss diesen vier Stufen kann auch die Ausbildung der Erzieher in der Lösung sozialer Probleme im Kindergarten strukturiert werden. Das Ausbildungsprogramm wurde in enger Zusammenarbeit mit den Erziehern an einem Kindergarten entwickelt. Einige Erfahrungen aus dieser Zusammenarbeit und der Anwendung des Problemlösungs-Paradigmas werden besprochen.

Cette étude rend compte d'une tentative de développement d'un programme de formation des enseignants des écoles maternelles, compte tenu des nouveaux développements de la théorie du comportement. Le but sous-jacent du programme de formation est de développer une stratégie générale de résolution des problèmes qui soit suffisamment simple et souple pour être utilisée dans les nouvelles situations problématiques, dans les quatre domaines sociaux des interactions enseignant-enfant, enseignant-enseignant, enseignant-parent, et école maternelle-collectivité. La résolution des problèmes est un enchaînement du comportement qui comprend les

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stades suivants: analyse du problème, choix des objectifs, choix des procédés de modification, application des procédés de modification, évaluation. La formation des enseignants les entraînant à résoudre les problèmes sociaux à l'école maternelle peut aussi être structurée en ces cinq phases.

Le programme de formation a été élaboré en étroite coopération avec les enseignants d'une école maternelle. Quelques expériences relatives à cette coopération et concernant l'application du paradigme de résolution des problèmes sont discutées dans cette étude.

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At least four interrelated fields of social activities in the nursery school can be differentiated: teacher-child interactions, teacher-teacher interactions, teacher-parent interactions, and the field of educational activities in the community. In each of these social fields the teachers are confronted with situations in which reacting appropriately requires the ability to analyse social situations and the ongoing behaviour, to evaluate the possible advantages and disadvantages of specific interventions on their part and to observe the behaviour change due to these interventions.

The daily activities of nursery school teachers in the four social fields comprise a wide range of behaviour which differ considerably in complexity and social function.

In the field of teacher-child interactions the teachers listen and talk to children, they play with children, they assist children in their activities, they tell stories, they help to find solutions if the intentions of the children are in conflict with their own intentions or with those of other children, and they serve as important behavioural models for the children.

In the field of teacher-teacher interactions the teachers plan the educational programmes together, they substitute for each other in case of absence, they discuss their specific problems and experiences, they try to help younger colleagues, and they are engaged in the organisation of festivities and other social events in the nursery school.

In the field of teacher-parent interactions the teachers talk with the parents about the nursery school and the home situation, they counsel parents who have problems with their children, they organize meetings with parent groups, and they cooperate with parents in the institutional organisation of the nursery school.

In the field of educational activities in the community the teachers visit certain places in the community with the children, they cooperate with the

schools and other institutions of the community, and they try to influence public opinion in matters concerning early childhood education.

The teachers try to cope with these various situational demands by drawing information from earlier experiences in similar situations, from experiences of other teachers and from various educational and psychological theories. Most teachers have developed their own way of handling the social problems in the four fields they face every day: some of them rely more on ad-hoc strategies of problem-solving of their own, some of them rely more on decisions reached in group discussions, and some rely more on specific theoretical knowledge. By means of these strategies the teachers somehow manage to do their hard job. However, feelings of permanent failure and under-achievement are widespread among nursery school teachers.

In our opinion one particular cause of dissatisfaction among nursery school teachers is that they tend to perceive the social events in the four social fields in isolation from each other and from the institutional and sociological conditions of the nursery school, the community, and society in general.

Another important cause of the teachers' negative feelings concerning their occupational achievements is their institutional isolation. Often teachers complain that they have no time left to discuss their problems with their colleagues in a satisfying way and that they have not had enough training for this cooperation. They also feel that they lack competencies for adequate communication and cooperation with parents.

A third cause of the teachers' dissatisfaction is their tendency to solve daily problems in a more or less unsystematic way. Because of the often extreme situational pressures the teachers sometimes neglect the fact that education should be a systematic process which comprises several steps, each of which represents a specific function for the whole educational interaction between the child and his adult partners.

It is important to recognize that these behavioural tendencies of nursery school teachers are themselves caused by a variety of institutional, educational, sociological and political conditions which have a great impact on the system of early childhood education.

In our opinion every effort to change the situation of the nursery school teachers will fail if it does not result in helping the teachers to analyse their behavioural tendencies in connection with the various conditions. Such a competency is central to what we call a *general strategy of solving social problems*. Other parts of this strategy are the competency to set realistic educational goals and to select and apply effective interventionary measures

in cooperation with children and parents.

In order to construct a general strategy of this kind for solving social problems in the nursery school together with the teachers, we refer to *new developments in behaviour theory*. During one year of intensive cooperation with the teachers of a nursery school we tried to adapt these recent theoretical and procedural principles to the nursery school situation.

The basic theoretical hypothesis of behaviour theory is that human behaviour is controlled by events inside and outside the organism, e.g. cognitions, evaluations, and social situations. These events may function as stimuli which guide the behaviour or as behaviour consequences which change the probability of the occurrence of a specific combination of stimuli and behaviour. What has changed in recent years is how this basic hypothesis is used to produce practical instructions for behaviour modifiers (e.g. Bandura, 1977; Craighead, Kazdin, and Mahoney, 1976; Mahoney, 1977; Meichenbaum, 1977; Reinecker, 1978):

- In the traditional behaviour modification procedure the *competence of behaviour change* rested in the behaviour modifier, who often also determined the situation for behaviour change, since the client's behaviour was modified mainly in special therapeutic laboratories. In the modern behaviour modification procedure there is a strong tendency to transfer the competence of behaviour change to the client himself by means of teaching techniques of self-assessment.
- Another tendency in recent developments of behaviour modification is to treat and train the client in his *real life environment*, that is in his family, school, or at his place of work.
- A further tendency is to see not only the client alone with his behaviour problems but the whole group of which the client is a member and to use the other members of the group as aides in the modification process.
- A fourth and perhaps most important tendency is not to wait until severe behaviour problems actually occur but to apply the methods of behaviour analysis and treatment at an early stage of problem development to *prevent* more severe behaviour problems.

The target behaviour in the modern behaviour modification programme may include the client's cognitive abilities for handling his problem as well as the emotional and motor aspects of the problem behaviour depending on the specific pattern of the problem behaviour (Wolpe, 1978). The problem-solving paradigm, as we see it, is a means for modifying all three aspects of behaviour.

During the training the therapist serves as a partner of the client in the

problem-solving process and not as a teacher who tells him how to behave appropriately. The therapist and the client cooperate in a close partnership to which both partners bring their different but equally important experience and competency. One main task of the therapist is to help the client to utilize all the information concerning the problem in an explicit way and to help the client to exercise alternative ways of behaviour: "It has long been a laboratory axiom that the organism knows best. We must adopt this with a new seriousness. The person is a mirror for his or her response contingencies. Behavior is adaptive. It has a close integrity with the controlling contingencies. The behaviorist should listen carefully as partner and colleague in social reform. Our role in the change process will be as a catalyst – to assist in the design of solutions" (Holland, 1978, p. 173). The newly defined role of the behaviour therapist in the change process is also stressed by Willies and Giles (1978) in their call for better communication between behavioural psychologists and their scientific and public critics.

In other words the client in a modern behaviour modification programme is trained in cooperation with his group members and in his real life situations to develop such self-control techniques that prevent or at least reduce behaviour problems which might occur to him or his group members in the future. The underlying aim of the training is a general problem-solving strategy which is simple and flexible enough to be used in new problem situations. It should be clear that such training can be very profitable for all those who are engaged in work with groups, e.g. nursery school teachers.

In recent years the training of problem-solving competencies has received more and more attention from behaviour modifiers and therapists, particularly in the framework of *self-control research* (e.g. Reinecker, 1978) and *behaviour modification in groups* (e.g. Hillmeier, 1976). The goal in developing problem-solving skills is to train an individual or a group to handle new problems rather than merely to solve a single problem which happens to be present at that time. Through training in some specific problem situations it is assumed that the clients will develop a general strategy which enables them to cope with other similar situations.

It is this characteristic of implicating a general social competency that makes the problem-solving approach highly relevant for *primary prevention* and *mental health* (Cowen, 1977). Spivack and Shure (1974) reported that social problem-solving skills such as the ability to perceive alternatives, means-ends relations, and the effects of one's own behaviour on others correlated significantly with indices of adjustment in various clinical samples. Hence they developed a social problem-solving curriculum for 4-year old Head-Start children. They also found in this sample that training

problem-solving established a competency that affected many other behavioural variables that are usually related to good ajustment and mental health. These findings underline the great importance of the problem-solving approach for the nursery school and particularly for nursery school teachers as important behavioural models for the children.

The *process of problem solving* is a well studied psychological field. Theories of problem solving were constructed mainly for psychomotor and cognitive behaviours (e.g. Newell and Simon, 1972; Dörner, 1976). In the framework of his general theory of human behaviour Skinner (1966) presented a fundamental analysis of problem solving that also covers social problems. In his analysis Skinner stresses the point that problem solving is a behavioural process consisting of certain steps, the function of which is to make the problem solving response more probable. The structured and sequential nature of human behaviour is also described and discussed by cognitive psychologists (e.g. Miller, Galanter, and Pribram, 1961) and modern action theorists (e.g. Galperin, 1974; Jaeggi, 1979; Wilhelmer, 1979).

In his theory of psychological counseling Kaminski (1970) interpreted the therapist's handling of an individual's behaviour problems as a *highly differentiated problem-solving process* with many stages of information processing, actions, and evaluations. D'Zurilla and Goldfried (1971) divided the process of solving behavioural problems into *five stages*: The problem-solver (1) recognizes the problem, (2) analyses the specifics of the problem and determines what needs to be accomplished, (3) looks for alternative courses of action, (4) decides among the action alternatives, and (5) evaluates the success or failure of the chosen action.

Some minor changes in the focusing of the five steps may bring the problem-solving paradigm to an even closer affinity with the problem-solving activities in *groups*. We divide the problem-solving process into the following five stages which are closely related to the five stages in the theory of D'Zurilla and Goldfried (1971, 1973):

1. Problem analysis
2. Selection of goals
3. Selection of modification procedures
4. Application of modification procedures
5. Evaluation

Each of these steps comprises several specific competencies and may thus result in specific difficulties which have to be overcome by the training.

The diagnosis and treatment of these deficits in groups is an appealing task for modern behaviour modifiers. In recent years the problem-solving process in groups was studied most often in clinical groups (e.g. Coché, 1977) but also in non-clinical groups, e.g. community groups (Briscoe, Hoffmann and Barley, 1975). It is also applied to educational problems in the fields of communication and verbal behaviour (Strohner, Becker, and Hillmeier, 1979).

The *training of nursery school teachers in the application of the problem-solving paradigm* must itself be guided by the above outlined principles of the application of modern behaviour theory. That is to say:

- The aim of the training is not only to master a single problem situation but also a large number of *future problem situations*, the specific characteristics of which are not yet known. This aim can be seen in connection with the goal of primary prevention.
- The target behaviour is not a specific response but a *general strategy* to find responses which can cope with the problem situation.
- The teachers talk about the general strategy and use their verbal behaviour in a *self-instructional type of self-control*. Thus the training of a verbal response repertoire or rule-governed behaviour is an essential part of the training.
- Throughout the training the teachers try to handle at least one of *their own problem situations* by means of the learned strategy and receive feedback for their efforts to cope with that situation.

The training of the problem-solving strategy proceeds by developing each of the five stages separately. This does not mean that the obvious and, in the practical application of the paradigm, very important interdependencies between the stages are neglected. The duration and structure of the problem-solving training can be adapted easily to the specific intentions and internal and external conditions of the training, which may make it necessary to implement only some of the five steps of the problem-solving process and only one or two of the four social fields (teacher-child-interaction, teacher-teacher-interaction, teacher-parent-interaction, educational work in the community) for an intensive training.

For each of the five problem-solving steps in each of the four social fields different specific competencies on the part of the teacher are necessary. The training should centre on those competencies which the teachers can use best to solve their specific problems and to help them to achieve their educational intentions:

1. *Problem analysis.* According to their educational intentions the teachers first learn to describe behavioural sequences and situations between

children, teachers, and parents. The descriptions specify situations, behaviours, and behavioural consequences and may be written on cards which the teachers collect in a special file. An important question in this step may be how to get such information from the parents or other colleagues of the teacher.

Having collected some cards the teachers are able to analyse the behaviour, i.e. they are able to hypothesize which conditions maintain the behaviour in question. It is important that the trainer makes clear that this is not new for the teachers but something which they have long been doing, but perhaps in a less systematic way.

2. *Selection of goals.* In the second step of the problem-solving process the teachers learn how to set realistic goals. This is achieved by considering long-term educational goals, the results of the problem analysis, and by consulting parents, colleagues, and children to get information concerning their wishes and intentions. In addition the teachers learn how to formulate the goals closely related to observable behaviours.
3. *Selection of modification procedures.* In order to select a modification procedure appropriate to reach the selected goal the teachers should realize that they have already an immense repertoire of modification procedures which they apply more or less systematically. In cooperation with colleagues, parents, and children the teachers should select a practicable procedure.

   An important criterion for this selection must be whether the chosen procedure enables the persons involved to solve problems in a way similar to that used by the teachers. Thus modeling, role-playing, and the construction of rule-governed behaviour are certainly essential strategies for this purpose.
4. *Application of modification procedures.* The aim of this step in the training process is to learn how to apply the chosen modification procedure systematically in cooperation with all persons involved.

   During the application of modification procedures a permanent feedback is very helpful, e.g. by means of describing the ongoing modification procedure on file cards.
5. *Evaluation.* The final step in our problem-solving paradigm refers to the judgement of success or failure of the modification procedure. This step requires similar observation and behaviour analysis as in the first stage. The teachers should discuss the result of the problem-solving process with their colleagues, the children, and parents in order to draw conclusions concerning similar problem-solving procedures in the future.

Depending on the results of the fifth step in the problem-solving

process the teachers may decide whether they should implement the problem-solving process a second time. This may be necessary, because the teachers might realize that the problem analysis did not cover all causal conditions of the problematic behaviour. In some of these cases the teachers might discover that these hidden conditions are institutional, sociological, or political in nature and are therefore difficult to modify directly by educational or psychological intervention.

It is an *essential condition of the success* of such a team or teacher-training that the teachers themselves organize and structure the training in cooperation with the trainer by offering their experiences, their specific competencies, and their interests and by their readiness to cooperate with their colleagues and to give mutual feedback about their problems and progress during the training (Falk and Johnson, 1977; Johnson, 1977).

Method of Programme Development

The method of programme development was based on a long-term and intensive cooperation between teachers and psychologists (Zimmer, 1973).

During a one-year cooperation with the eight teachers of a nursery school we developed together a training programme based on the above-outlined principles (Becker, Fthenakis, Hillmeier, and Strohner, 1978). This took place in a nursery school with four classes, each of which had about 25 children and two teachers (one full-time teacher and one part-time teacher).

During the first seven months of the cooperation with the nursery school teachers their competencies in relation to observational techniques in all four social fields and to the analysis of these interactions were practised. The teachers learned how to document their observations on file cards and how to analyse this material.

After this the teachers of each of the four classes chose a specific problem, either in the field of teacher-child-interactions, teacher-teacher-interactions, teacher-parent-interactions, or educational work in the community, and applied to it the problem-solving paradigm the final form of which was itself a product of the cooperation:

- The teachers of class A counseled the parents of a boy with discipline problems at home and in class.
- The teachers of class B set the goal of cooperating together in a more harmonious way.
- The teachers of class C systematized their weekly planning of the

educational programme and compared their different teaching styles.
- The teachers of class D concentrated on helping a hyperactive boy to settle in the group.

This problem-solving phase took another three months. The speed of progressing through the five steps and the various procedures and interventions were determined by the teachers themselves in cooperation with the trainers, parents, and children.

In the last two months of the training the team of teachers and psychologists tried to draw conclusions and generalizations concerning optimal training procedures which can foster the handling of the problem-solving paradigm.

The cooperation between the nursery school teachers and the psychologists was organized in different forms of meetings:
- At a general level all teachers and psychologists met together for plenary sessions. The function of these plenary sessions was to discuss, plan, and delegate the activities of the team.
- The four working-groups consisted of the two teachers of a class and one or two psychologists.
- In a third form of cooperation the psychologists assisted the teachers in their class work at least once a week.

To the development of the training programme the teachers contributed their practical experiences and their motivation to change some of the social situations in the nursery school. The psychologists offered their theoretical knowledge and their motivation to contribute to a change of the general situation of early childhood education. In our opinion, and also in that of some behaviour theorists (e.g. Holland, 1978), the *contributions of all participants* are necessary and equally important to produce relevant social programmes.

Experiences with the Programme Development

Since the aim of our cooperation with the nursery school was the development of the training programme and not the evaluation of its outcome, we are not yet able to offer any controlled data concerning the effectiveness of the programme. However, in the cooperation with the teachers we have gathered some experiences which result partially from tape record analysis by two independent psychologists and which can be summarized in the following way (Becker, Fthenakis, Hillmeier and Strohner, 1978):

We found that the original *expectations* of teachers and psychologists concerning their cooperation differed to a large extent:

- The teachers expected practical consultation from the psychologists. Particularly in the first more general and introductory phase of the cooperation it was hard for them to see the necessity of extensive discussions about the conditions of social situations in the nursery school and about the determination of educational goals. The teachers would have preferred to pick out one or more problematic situations right from the beginning of the cooperation and to approach them according to the psychologists' advice.
- The psychologists, on the other hand, expected to gather extensive and detailed information concerning the various aspects of social life in the nursery school. It was not their intention to present immediate solutions for the social problems reported to them by the teachers but to analyse these problems and their conditions with respect to their significance for the general structure of social life in the nursery school.

In particular the working groups and the psychologists' class visits were considered by the teachers to be very helpful and to form an effective basis for a mutual comparison of the different expectations of teachers and psychologists.

A central part of the problem-solving process is its first step: *problem analysis*. Both observation and behaviour-analysis competencies are necessary to construct a useful basis for being able to proceed in the further process of problem solving. Although nursery school teachers always observe the behaviour of children, their colleagues, and parents, they tend to focus their attention on single behaviours or events without taking into account the antecedents, consequences, and situational and institutional conditions of the single behaviours to a satisfying extent. This seems to be how psychologists tend to perceive and analyse their social environment but not nursery school teachers who find themselves in a rather different social function.

It required a fair amount of training before the teachers were acquainted with the analytical observation strategy. We feel that the observation and analysis of several social situations both by the trainer and the teachers and the consecutive comparison of the behavioural reports is a good way to overcome the apparently great problems of the teachers in this respect.

In addition we found that it is very helpful for the teachers to use a *file-card system* for their observations in order to achieve a more solid basis for behaviour analysis and for the long-term transfer to similar situations in the future. A file card may contain information about the persons involved in the observed actions, the social and educational context, time, place, and the ongoing events, but also any other information concerning the problem

situation – be it vague or rudimentary. Since nursery school teachers usually have little time to write down all important observations they make during their interactions with children, colleagues, and parents they should concentrate on those situations that are relevant for solving the specific problem they are just working on. We found that it was a great problem for the teachers to find a satisfying balance between focussing on one specific problem and not neglecting other important events in the everyday social life of the nursery school.

The *systematic application of the problem-solving paradigm* helped the teachers to see more clearly their potential power of behaviour change. On the other hand, they also became more aware of the restricted chances of change. We may talk of institutional and ideological restrictions. Institutional constraints such as room size, number of children in one class, preparation time for the teachers, limitations to the involvement of parents in the educational work etc. are difficult to handle by educational and psychological procedures. A significant change in these areas is only possible if teachers and parents learn more to recognize their political responsibilities and consequently become active in trade unions, political parties and public movements. Ideological restrictions refer essentially to the tendency of the teachers to see their main task in the training of the children's cognitive, aesthetic, motor, and interactional competencies and not to see their educational work in the framework of primary prevention and social work in the community and as an important public and political affair.

The teachers felt that the *specific case work* was a good way to become acquainted with the underlying philosophy of the problem-solving paradigm. The psychologists learned that the five steps of the problem-solving paradigm are to be applied very flexibly if one wishes to work on all relevant aspects of complex and hardly predictable social situations. For behaviour theorists it is sometimes hard to realize that the situation comes first and not the paradigm.

Conclusions

The information which is at present available leads us to believe that teachers can be helped by problem-solving training to handle daily social situations in the nursery school more systematically. By applying the proposed problem-solving paradigm teachers seem to be better able to relate their educational goals to the social events in the everyday life of the nursery school.

After the year of cooperation with the nursery-school teachers we feel that the training of teachers in the application of the problem-solving paradigm is more effective if the teachers can refer to a written instruction manual which combines theoretical and practical information about the particular steps of the problem-solving process. We are at present engaged in writing such a training programme (Becker, Fthenakis, Hillmeier, and Strohner, 1979), again in close cooperation with the nursery school teachers.

This preliminary programme will consist of five training units:

- The first unit provides a survey of various social situations in the nursery school and discusses some institutional conditions of these situations.
- The next three units present practical examples of how to apply the problem-solving paradigm in the three social fields of teacher-child interactions, teacher-teacher interactions, and teacher-parent interactions.
- The fifth unit refers to the community environment of the nursery school and discusses early childhood education in terms of social work in the community.

In the field of problem-solving in the nursery school there are still many questions open for further research. What has to be done next is to evaluate the effects of this teacher-training programme in controlled studies. Only then shall we be able to tell with empirical support whether the training of problem-solving competencies can help nursery school teachers to solve daily problems better than other training programmes.

REFERENCES

BANDURA, A. *Social learning theory*. Englewood Cliffs, N.J.: Prentice-Hall, 1977.

BECKER, B., FTHENAKIS, W.E., HILLMEIER, H., and STROHNER, H. *Lerntheoretisch orientierter curricularer Ansatz zur Fortbildung von Erziehern und Sozialpädagogen: Zwischenbericht*. München: Staatsinstitut für Frühpädagogik, 1978.

BECKER, B., FTHENAKIS, W.E., HILLMEIER, H. and STROHNER, H. *Das Sozialgeschehen im Kindergarten: Ein Fortbildungsprogramm für Erzieher*. (in preparation).

BRISCOE, R.V., HOFFMAN, D.B., and BAILEY, J.S. "Behavioral community psychology: Training a community board to problem solve". *Journal of Applied Behavior Analysis*. 8 (1975), pp. 157-168.

COCHE, E. "Problemlösegruppen im klinischen Bereich". *Gruppenpsychotherapie und Gruppendynamik*. 12 (1977), pp. 49-67.

COWEN, E.L. "Baby-steps toward primary prevention". *American Journal of Community Psychology*. 5 (1977), pp. 1-22.

CRAIGHEAD, W.E., KAZDIN, A.E., MAHONEY, M.J. *Behavior modification: Principles, issues, and applications.* Boston: Houghton Mifflin, 1976.

DÖRNER, D. *Problemlösen als Informationsverarbeitung.* Stuttgart: Kohlhammer, 1976.

D'ZURILLA, T.J., and GOLDFRIED, M.R. "Problem-solving and behavior modification". *Journal of Abnormal Psychology*. 78 (1971), pp. 107-126.

D'ZURILLA, T.J., and GOLDFRIED, M.R. "Cognitive processes, problem-solving, and effective behavior". In GOLDFRIED M.R. and MERBAUM M. (eds.): *Behavior change through self-control.* New York: Holt, 1973.

FALK, D.R., and JOHNSON, D.W. "The effects of perspective-taking and egocentrism on problem solving in heterogeneous and homogeneous groups". *Journal of Social Psychology*, 102 (1977), pp. 63-72.

GALPERIN, P.J. "Die geistige Handlung als Grundlage für die Bildung von Gedanken und Vorstellungen". In GALPERIN P.J. et al. (eds.): *Probleme der Lerntheorie.* Berlin/DDR, 1974.

HOLLAND, J.G. "Behaviorism: Part of the problem or part of the solution?" *Journal of Applied Behavior Analysis.* 11 (1978), pp. 163-174.

HILLMEIER, H. *Verhaltensmodifikatorische Materialien zu einem integrativen Konzept klinischer Intervention in Gruppen.* Würzburg: 1976. (Unpublished Diplomarbeit.)

JAEGGI, E. *Kognitive Verhaltenstherapie.* Weinheim: Beltz, 1979.

JOHNSON, D.W. "The distribution and exchange of information in problem-solving dyads". *Communication Research.* 4 (1977), pp. 283-298.

KAMINSKI, G. *Verhaltenstheorie und Verhaltensmodifikation.* Stuttgart: Klett, 1970.

MAHONEY, M.J. "Reflexions on the cognitive learning trend in psychotherapy". *American Psychologist.* 1 (1977), pp. 5-13.

MEICHENBAUM, D. *Cognitive behavior modification: An integrative approach.* New York: Plenum Press, 1977.

MILLER, G.A., GALANTER, E., and PRIBRAM, K.H. *Plans and the structure of behavior.* New York: Holt, 1960.

NEWELL, A., and SIMON, H.A. *Human problem solving.* Englewood Cliffs, N.J.: Prentice-Hall, 1972.

REINECKER, H. *Selbstkontrolle: Verhaltenstheoretische und kognitive Grundlagen, Techniken und Therapiemethoden.* Salzburg: Otto Müller, 1978.

SKINNER, B.F. "An operant analysis of problem solving". In B. KLEINMUNTZ (ed.): *Problem solving: Research, method, and theory.* New York: Wiley, 1966.

SPIVACK, G. and SHURE M.B. *Social adjustment of young children: A cognitive approach to solving real-life problems.* San Francisco: Jossey-Bass, 1974.

STROHNER, H., BECKER, B., and HILLMEIER, H. *Spracherziehung im Vorschulalter als kooperatives Problemlösen.* (in preparation.)

WILHELMER, B. *Lernen als Handlung.* Köln: Pahl-Rugenstein, 1979.

WILLIES, J. and GILES, D. "Behaviorism in the twentieth century: what we have here is a failure to communicate". *Behavior Therapy.* 9 (1978), pp. 15-27.

WOLPE, J. "Cognition and causation in human behavior and its therapy" *American Psychologist.* 33 (1978), pp. 437-446.

ZIMMER, J. (ed.) *Curriculumentwicklung im Vorschulbereich.* Vols. I and II. München: Piper, 1973.

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SELF-DIRECTED LEARNING AND SCHOOLING: IDENTIFYING PERTINENT THEORIES AND ILLUSTRATIVE RESEARCH[1]

RODNEY SKAGER

Changing modern societies offering diversified opportunities for self-education require citizens who are self-directed in their approach to learning. In this review, self-directed learners are characterized as manifesting personal attributes of self-acceptance as a learner, planfulness in learning activities, intrinsic motivation for learning, ability to internalize the evaluation process, openness to experience, flexibility in the approach to learning, and autonomy in the setting of learning goals and selection of the means of learning.

Contemporary writers critical of the school maintain that learner attributes like the above are suppressed or prevented from developing because schools require conformity and induce dependency. Others feel that the right kind of schooling can enhance self-direction in learners. Unfortunately, evidence of the latter is lacking.

Six theoretical positions on human learning that have relevance to the development of self-direction are identified and are here labelled: modeling, reinforcement, curiosity motivation, competency motivation, attribution theory and personal causation, and humanistic. *All of the suggested attributes of the self-directed learner are found to be related to one or more of the theories examined. Finally, four approaches to educational practice explicity associated with self-direction are identified:* experiential learning, discovery learning, the open classroom, *and* structured individualization. *In general, there is some positive evidence that attributes of self-directed learning can be deliberately taught, though more intensive studies of particular types of school environments as well as longitudinal research are badly needed.*

Les sociétés modernes en évolution qui offrent des opportunités diversifiées d'autodidaxie, doivent avoir des citoyens capables d'auto-diriger le procesus d'acquisition de leurs connaissances. Dans ce compte-rendu, les individus auto-dirigés sont caractérisés comme capables de diagnostiquer leurs propres besoins de connaissances, faisant preuve d'une motivation intrinsèque,, d'une aptitude à intérioriser le processus d'évaluation, d'une ouverture à l'expérience, d'une flexibilité dans l'approche de l'acquisition des connaissances, d'une autonomie dans la fixation des objectifs et le choix des moyens d'apprentissage.

Les auteurs contemporains qui critiquent le système scolaire soutiennent que les qualités de l'individu autodirigeant son apprentissage, telles qu'elles sont mentionnées ci-dessus, sont étouffées, ou qu'un obstacle est mis à leur développement, parce que les écoles exigent la conformité et incitent à la dépendance. D'autres auteurs estiment qu'une scolarité bien comprise peut développer l'autodirection chez l'individu qui apprend; malheureusement ils n'en fournissent pas les preuves.

Six positions théoriques sur l'acquisition des connaissances ayant un rapport avec le

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développement de l'auto-direction sont identifiées et désignées comme suit: imitation d'un modèle, renforcement, motivation de la curiosité, motivation de la compétence, théorie de l'attribution de la causalité personnelle et théorie humaniste. On a trouvé que toutes les qualités avancées comme étant celles de l'individu autodirigé, s'apparentent à une ou plusieurs des théories examinées.

Finalement, quatre approches de la pratique pédagogique, explicitement associées à l'auto-direction, sont décrites: l'apprentissage empirique, l'apprentissage par la découverte, la classe ouverte, l'individualisation structurée. Il existe en général quelque preuve positive que les qualités de l'apprentissage auto-dirigé peuvent être délibérément enseignées, mais le besoin d'études plus poussées sur des types particuliers d'environnement scolaire, et de recherche longitudinale, se fait fortement sentir.

Im Wandel befindliche moderne Gesellschaften mit differenzierten Selbstbildungs-Möglichkeiten brauchen Bürger, die auf selbstbestimmtes Lernen ausgerichtet sind. In dieser Studie werden selbst bestimmende Lernende charakterisiert durch Eigenschaften wie Selbst-Anerkennung als Lernender, geplantes Lernen, innere Lern-Motivation, die Fähigkeit, den Evaluationsprozess zu verinnerlichen, Erfahrungsoffenheit, Flexibilität in Lernansätzen, und Autonomie in Festlegen von Lernzielen sowie in der Wahl von Lernmitteln.

Zeitgenössische Kritiker der Schule behaupten, Eigenschaften wie die obigen würden unterdrückt oder in ihrer Entwicklung behindert, weil die Schule Konformität verlangt und Abhängigkeit anerzieht. Andere sind der Ansicht, dass die richtige Art von Schulunterricht die Selbstbestimmung bei den Lernenden verstärken kann; hierfür fehlt es jedoch leider an Beweisen.

Sechs theoretische, für die Entwicklung von Selbstbestimmung relevante Positionen in bezug auf menschliches Lernen werden vom Verfasser herausgearbeitet. Er bezeichnet sie als Lernen am Vorbild, Verstärkung, Neugier-Motivation, Kompetenz-Motivation, Attributionstheorie und persönliche Kausation, *und* Menschenbildung. *All diese Eigenschaften stehen in Bezug zu einer oder mehreren der untersuchten Theorien. Schliesslich werden vier verschiedene Ansätze zur Bildungspraxis identifiziert:* erfahrendes Lernen, entdeckendes Lernen, offener Unterricht *und* strukturierte Individualisierung. *Allgemein gesprochen, gibt es einige Hinweise darauf, dass selbstbestimmtes Lernen gezielt gelehrt werden kann; doch bedarf es noch eingehender Untersuchungen über bestimmte Unterrichtstypen sowie longitudinaler Forschung.*

Self-direction in learning is an increasingly important human attribute in modern societies. As opportunities for formal and informal education are extended virtually throughout the lifespan, developed as well as developing societies must look to potential participants who are both willing and able to take advantage of such opportunities.

Defining Self-Direction

How do we recognize self-directed learning? First, a self-directed learner is

not necessarily an individual learning autonomously, though this may often be the case. Self-directed learners may be equally likely to seek help from others and to work cooperatively. The essential feature of their behavior is a willingness to initiate and maintain systematic learning on their own initiative. Tough (1971), for example, identified learning activity in adults that is *intentional* rather than accidental or incidental, that is aimed at developing some *definite knowledge or skill* rather than being a vague quest for self-improvement, that is to be *retained* over time, and for which the *predominant motive* is mastery of the knowledge or skills involved. These attributes define self-directed learning behavior as the term is used here. What are self-directed learners like? This is a more difficult question. A recent review of pertinent literature (Skager, 1978) yielded seven types of personal attributes: (1) *self-acceptance*, or positive views about the self as a learner based on successful prior experiences; (2) planfulness, or the capacity to (a) diagnose one's own needs, (b) set appropriate goals, and (c) select or devise effective learning strategies to accomplish these goals; (3) *intrinsic motivation*, or willingness to persist in learning in the absence of immediate external rewards or punishments; (4) *internalized evaluation*, or the ability to apply evidence, whether derived from personal observations or offered by external agents, to the qualitative regulation of one's own learning activity; (5) *openness to experience*, or willingness to engage in new activities because of curiosity or similar motives; (6) *flexibility*, or willingness to explore new avenues of learning; and (7) *autonomy*, or the ability to choose learning goals and means that may be seen as unimportant or even undesirable within an immediate social context.

Schools and Self-Direction

The role of schooling in the development of self-direction is central and controversial. Liberal and radical educational thought in many developed and some developing countries has condemned the traditional school as antithetical to all aspects of self-direction. Hargreaves (1974) summarized the charges against the school: substitution of external for internal motivation, memorization instead of "learning to learn," external instead of internal evaluation, and imposition instead of voluntarism. One movement, following Illich, categorically rejects the school. Others take various reformist positions.

Still, if schools are as powerful an influence on the learner as most radical critics maintain, perhaps they can also be a force for enhancing, rather than

inhibiting, self direction. Such is the common assumption of the reformist position described by Hargreaves and reiterated by Marbeau (1976) who believes that people who can educate themselves as adults have been "...exposed to situations of responsibility and autonomy in (the) school years, for they offer the best means of acquiring a taste for personal effort and a desire to progress" (p. 15). This is a plausible assertion, but little more than that. No evidence links the kinds of school learning conditions referred to by Marbeau with participation in education later in life.

If connections between schooling and self-direction have not been established, are there at least one and possibly more theoretical bases for believing that people can "learn" to guide their own learning processes ? Is there evidence supporting any these theories ? The main purpose of this article is to identify pertinent theories and to examine illustrative evidence relating to each.[2] I believe that it is vital to begin with theory. Without a sound conceptual basis, educational research and development usually proceed rapidly towards triviality.

Theoretical Perspectives

At least six theoretical perspectives are relevant to the development of personal attributes of self-direction. These perspectives will be referred to respectively, as (1) *modeling*, (2) *reinforcement*, (3) *curiosity motivation*, (4) *competency motivation*, (5) *attribution theory and personal causation*, and (6) *humanistic*. Most of these labels really define broad categories incorporating two or more distinguishable, though related, strands of theory and research. The perspectives overlap to some extent. However, they differ sharply in their conceptions of the motivational basis of human learning as well as in their assumptions about the degree to which the behavior of learners should be shaped by a controlled environment as compared to an environment which encourages spontaneous, individualized personal growth. The freedom versus control issue is at the heart of any conception of schooling in relation to self-directed learning.

Schools organized purely under any one of the perspectives would also be readily distinguishable. Participants would go about teaching and learning in different ways and in different contexts. However, this distinctiveness does not mean that the perspectives are mutually exclusive, given a flexible approach to organizing the learning environment.

Modeling

This first perspective incorporates two quite different, yet parallel, explanations of learning through imitation. Psychoanalytic learning theory was formulated earliest. As Sears (1967) suggests, it emphasizes the motivational principle of identification. Parents encourage learning in their children and provide warmth and nurture which in turn foster dependency and identification. The theory proposes that the latter mechanism underlies the child's imitation of the parent in the role model of learner. But is identification with role models relevant to learning in the school? Psychoanalytic learning theory focuses on the interactions of parents and very young children. Is the adult role model provided by the teacher also imitated by children through the mechanism of identification? Kagan (1966) argues that this is the case, at least for very young children. Learning in the earliest grades is a socially motivated phenomenon, a search for acceptance by significant others.

The principle of reinforcement is the motivational basis underlying the second theory about imitative behavior. Reinforcement theorists define the human model as a surrogate for the self. According to social learning theory children imitate or model behaviors they have seen reinforced (or punished) in others. Bandura and Walters (1963) also suggest that knowledge of the life history of a model can lead to modeling at a symbolic level, since in all cultures myths about heroic or saintly figures are used to educate the young. The learner acts out a social role absorbed through watching others engaging in learning behavior that is positively reinforced. Does research provide any evidence that this type of role modeling is a significant factor?

There are numerous studies demonstrating the learning of specific skills and competencies through imitation of models. For example, Henderson et al. (1975) found that most children in an experimental situation significantly improved their ability to order stimuli serially according to systematic strategies after watching televised models. The superiority of experimental subjects over controls was maintained in a later test of retention. But even learning a generalized cognitive structure such as seriation is not the same as learning a social role.

At least one experimental study does attempt to deal with role learning. Haskett and Lenfestey (1974) had college student tutors model adult reading behavior for preschool and kindergarten children. The tutors were trained to display involvement and enjoyment while they read, presumably reinforcing reading behavior in the children. Results showed that children read significantly more under the modeling condition. However, increased reading appeared to be tied to the presence of the tutor. The children imitated the

tutors, but the imitative behavior did not persist when the tutors were not present. These researchers recommended caution in "...assuming that modeling without reinforcement in the early stages of reading leads quickly to sustained increments of reading behavior" (p. 240). Likewise, it does not appear that an increase in the frequency of a learning behavior (reading) under only certain conditions (presence of model) amounts to learning a role.

Another subset of research on modeling deals specifically with the goal of teaching children to set appropriate standards for their own performance. Setting one's own standards for self-reward is consistent with internalized evaluation, one of the attributes of the self-directed learner cited at the outset. Perhaps a link can be forged here between a specific aspect of self-direction and reinforcement research on modeling. Bandura (1971) concluded that having children watch models who set stringent vs. easy standards of performance for themselves results in imitative behavior. When allowed to perform the same tasks, children who watched models using high standards set more stringent standards for their own performance than did children who watched models using low standards. Bandura also noted that the effectiveness of the modeling conditions may depend in part on how powerful and nurturing the models were perceived to be, the incentive value of the rewards, as well as other factors, although he cautioned that such findings might be merely an artifact of the experimental conditions under which they had been observed.

Thoresen and Mahoney (1974) reviewed and summarized the literature on self-imposed reward standards, drawing a number of positive conclusions. Among them were, first, that the effects of socially learned (e.g., modeled) self-reward patterns are basically equivalent to those of externally administered reinforcement systems in maintaining behavior. In addition these authors report that, given the opportunity to choose or alter their own standards of self-reward, subjects in experiments will often impose very high work requirements on themselves. In an important series of recent studies Lepper (1976) and his colleagues tested the generalizability of such effects over time and to new task situations. While the results were not entirely consistent, the overall conclusion was that children who originally observed models setting high standards for personal performance maintained similar standards over time and extended them to new tasks. These researchers concluded that setting standards derived from the performance of models was not merely passive mimicry but rather an active cognitive process resulting in the adoption of a generalized rule. According to Sagotsky and Lepper (1976), the overall findings lent encouragement to the conclusion

that it was possible to achieve "...persistent and generalizable behavior change through the use of techniques designed to alter the performance standards children set for themselves" (p. 29).

Evidence from research on the importance of modeling in the development of self-direction is thus mixed. The two major theories of modeling are highly pertinent, whether learning the social role of learner occurs through identification with significant others (psychoanalytic) or vicariously by observing rewards and punishments administered to models who may be perceived as surrogate selves (reinforcement). However, there is little in the way of research evidence, either positive or negative, to suggest that significant aspects of the *role* of learner are learned through modeling. On the other hand, attempts to induce the adoption of appropriate personal performance standards, clearly an important element of the internalized evaluation attribute, do show considerable promise.

Reinforcement

The theory that in most situations human behavior is primarily a function of previously experienced patterns of rewards and punishments extends far beyond the specific application to modeling cited above. In the radical Skinnerian formulation contingencies of reinforcement imply virtually total environmental control of the organism, a condition utterly antithetical to the conception of self-direction presented here. However other theories incorporating reinforcement as a fundamental principle are remarkably diversified. Two strands of work are particularly relevant to self-direction. The first explores the relationship between external reinforcement and intrinsic motivation, raising serious concerns about the negative effects of some types of external rewards on intrinsic motivation. The second deals with self-reinforcement.

External Reinforcement. When external reinforcement is used to maintain learning behavior the source of motivation is extrinsic to the learner. Thus, external rewards may inhibit the development of the self-directed learning attributes of intrinsic motivation and internalized evaluation, leaving the learner passively dependent on the environment for rewards and feedback on performance. In a series of studies, Deci (1971 and 1972) found this supposition to be true under certain circumstances. He set college students to work on an intellectual puzzle selected for its intrinsically motivating properties for most individuals at this age and educational level. Subjects were divided into a group receiving verbal (social) reinforcement and a

group receiving monetary (concrete) rewards. During waiting periods between experimental sessions the subjects were observed in order to determine how much time they voluntarily devoted to the puzzle task, the latter providing a measure of internal motivation.

Deci predicted that subjects given monetary rewards for successful performance would cognitively reevaluate the task, no longer seeing it as something to be done for its own sake. Intrinsic motivation would wane because performance was perceived as under the control of an external rewarding agent. In contrast, subjects who received social reinforcement would continue to be intrinsically motivated, since the locus of control for engaging in the behavior would still be internal. These predictions were mainly confirmed in the studies, with social reinforcement associated with greater willingness to engage in the experimental task during free time, though the result was observed primarily for males. However, the difference between the two groups was barely significant statistically and there was some possibility that groups were not equivalent before the experiment began, perhaps accounting in part for the higher post-experimental intrinsic motivation of the socially reinforced subjects.

In a later, more convincing study, Lepper et al. (1973) agreed with Deci that "...a person induced to undertake an inherently desirable activity as a means to some ulterior end should cease to see the activity as an end in itself" (p. 130). However, their analysis of self-perception theory suggested that Deci's monetary and social rewards were both extrinsic and would be equally detrimental to intrinsic motivation. They concluded that a more convincing test of this deduction would require an experiment in which (a) subjects are intrinsically motivated to engage in the task, (b) one group of subjects is asked to engage in the activity as a means to some external goal (*expected reward*) and another asked to engage in the activity for its own sake, but subsequently receiving the same extrinsic reward (*unexpected reward*), and (c) the effects of the two conditions on intrinsic motivation are tested in a naturalistic rather than experimental situation and at a point in time well after the experimental sessions.

Preschool children who had previously demonstrated high motivation for engaging in a drawing activity were selected for the Lepper et al. experiment. In addition to groups experiencing the expected and unexpected reward conditions, a third group was assigned to a *no-reward control* condition. Observations in the regular classroom of the children's spontaneous engagement in the drawing activity were made from one to two weeks after the last child had completed the experiment. Results showed that the unexpected reward and the no-reward control did not differ on post-test, and

that both groups spontaneously engaged in the drawing activity about twice as long during free choice time as did the expected reward subjects. Moreover, the drawings produced during the experiment itself were of significantly lower rated quality for the expected reward subjects. These findings appear to have important implications for practical situations in which children are rewarded with grades, privileges, and the like for activities that are already intrinsically interesting. This practice is common in schools.

Lepper et al. (1973) caution against overgeneralization. Extrinsic rewards were found to reduce motivation *only* for children who were already intrinsically motivated to perform the task. Other research has suggested that extrinsic incentives can be used to increase interest where initial interest is low, and the attractiveness of the activity only becomes apparent after engagement over some period of time.

Self-Reinforcement. The second strand of research on reinforcement deals with conditions in which learners administer their own rewards directly or keep records of their own performance. This work seems especially relevant to the self-directed learning attributes of internalized evaluation and planfulness. Extensive research on the direct training of self-reinforcement (as contrasted to indirect training through modeling) was also summarized by Thoresen and Mahoney (1973). The specific studies cited here are merely illustrative.

In a landmark study, Bandura and Perloff (1967) investigated the extent to which self-monitored vs. externally imposed reinforcement would maintain learning behavior in 7 to 10 year old children. Four processes were cited as subsidiary to self-reinforcing events: (1) prescribing a standard of adequacy for one's own behavior; (2) comparing the resulting behavior with the standard (often a normative comparison with the achievement of others); (3) controlling the reinforcer; and (4) acting as one's own reinforcing agent.

Bandura and Perloff gave children token rewards (to be exchanged later for prizes) for performing a rather mechanical task. There were four conditions: *self-monitored reinforcement*, where learners set their own performance standards and paid themselves in tokens whenever their own standard was achieved; *externally imposed reinforcement*, in which individual learners were arbitrarily assigned the same performance standard as had been voluntarily selected by a paired member of the self-monitored group (thus keeping performance standards and reward levels for the two groups identical); *incentive-control*, in which tokens were given at the beginning of the session (the same amount as received by a paired partner in the self-reward group); and *control*, where no reinforcement was given.

The results revealed that children in the self-reward condition worked as hard as those in the externally imposed condition. Both groups worked harder than either of the two control groups. When considered in conjunction with earlier research findings, these results seemed to indicate that individuals maintain relatively demanding standards for their own performance in order to avoid what Bandura and Perloff refer to as the "negative self-evaluative reactions" associated with the attainment of low quality standards.

The children in the Bandura and Perloff study did not learn meaningful content, but merely performed an artificial, repetitive task. Felixbrod and O'Leary (1973) extended this type of study to problem-solving in the school context. Similar results were obtained, with the authors concluding that "Self-management can serve as a practical and effective alternative to external control in naturalistic settings" (p. 250). However, summary statistics reveal that many learners lowered their own standards rather sharply over the period of the experiment. This suggests hardly surprisingly that high performance standards may be unstable where children find a task to be cognitively demanding, and where it is possible to obtain the same reward for less work.

Glynn et al. (1973) attempted to increase through behavioral self-control methods the proportion of time children spent "on-task" during reading periods. This research took a single group of children through several stages. Behavior was gradually shaped in the direction of full self-control of monitoring and reinforcement. After observing frequency of on-task reading behavior for several days to establish a baseline for each learner, the research design entered a phase in which learners were given various rewards on a random contingency schedule for observed on-task behavior. Ultimately, the children were moved to a point at which they recorded their own behavior on a form, decided whether the result was satisfactory, and administered their own rewards. The authors concluded that second grade children "...could successfully use behavioral self-control procedures in a regular classroom setting to maintain high rates of on-task behavior that had been established by externally administered reinforcement procedures" (p. 112).

Sagotsky et al. (1976) reported that self-monitoring significantly increased mathematics achievement and voluntary study on the part of 11 and 12 year old children in an individualized mathematics program. A group of learners who worked under self-monitoring conditions recorded the amount of work they had accomplished as well as whether their behavior was on-task at various points during study periods. This group performed better than

learners in a goal setting condition without self-monitoring, and as well as or better than a third group of learners who worked under a condition combining both self-monitoring and goal setting. The authors speculated that self-monitoring, even without rewards, elicits covert self-evaluative processes which serve to enhance learning.

Self-evaluative processes are a central focus of current developments in social learning theory. Bandura (1976) summarized the two basic lines of research, the first investigating how people develop standards and the second testing in various ways the degree to which "self-administered consequences" enhance performance. Evidence for the significance of self-reinforcement appears to be strong. Bandura (1978) also concludes that children learn to establish personal performance standards "...by precept, evaluative consequences accompanying different performances, and exposure to the self-evaluative standards modeled by others" (p. 353).

Research on reinforcement comprises a very large body of work. In general, it reveals that important aspects of self-direction may be "taught". The self-directed learning attributes of self-set performance standards and systematic self-monitoring, once learned, persist over time and generalize to other learning situations. Moreover, contemporary views of the role of reinforcement in human learning avoid the environmental determinism of early behaviorism by concentrating on how people learn to direct their own learning processes. Still, caution is warranted because of the seeming incompatibility between behavioristic approaches to the control of behavior and the humanistic values which underly the concept of self-direction in learning.

Curiosity Motivation

Self-directed learners are "open to experience." But where does this trait originate? Berlyne (1965) distinguished between *extrinsic* behavior directed at the attainment of clearly definable consequences and *intrinsic* behavior characteristic of exploratory activity conducted for its own sake. *Epistemic* curiosity is reflected in spontaneous attempts to explain experience. Such attempts occur when there is some sort of cognitive conflict. Surprise, doubt, perplexity, bafflement, or contradictory events elicit this reaction, and spontaneous exploratory behavior is the result, according to Berlyne.

Berlyne and others see curiosity as a drive motivating all mammals, aroused by various types of stimulus conditions and reduced through exploratory behavior. Langevin (1971) contrasts Berlyne's conception with

that of personality theorists who see curiosity as a variable on which individuals differ sharply. For example, Maw and Maw (1964) reported that highly curious children are rated as more intelligent by their teachers, ask better questions in class, and possess more general information. Such children prefer complex as opposed to simple stimuli. They are also persistent as learners. Langevin confirmed the relationship between curiosity and intelligence in children, but found that tests measuring curiosity had low inter-correlations, casting doubt on the unitary nature of the construct. As a personality variable, curiosity may subsume a variety of behaviors (observing, thinking, questioning, specific and diverse exploring, and choosing) that are not highly interrelated.

Research following the motivational theories of Berlyne and others has scrutinized conditions which arouse curiosity and related learning. Switzky, Haywood and Isett (1974) tested conflicting predictions about the effect of stimulus complexity in eliciting exploratory behavior. With 2 to 7 year old children, simple polygen objects elicited play rather than exploration, with the reverse true for complex objects, as predicted by theory. Curiosity, measured as time spent spontaneously in exploratory behavior, increased with age. For the youngest children in the sample, maximum exploration was elicited by stimuli of moderate complexity. For older children exploration increased linearly with stimulus complexity.

A third theory about curiosity emphasizes beliefs, rather than motivation or personality. Kreitler et al. (1974) suggest that curiosity behavior is based on (a) beliefs about norms (e.g., whether it is acceptable for a child to ask adults questions), (b) general beliefs (e.g., people like children who ask questions), (c) beliefs about self (e.g., "I like new games") and (d) beliefs about goals (e.g., "I will need to know many things"). These researchers found that first grade children high in all four belief categories also scored higher on most behavioral measures of curiosity. These findings support Langevin's (1971) conclusion that curiosity is a broad concept incorporating a number of relatively independent subsystems.

Vidler (1977) recently derived educational implications from research on curiosity. First, exploratory learning in children declines as situations become more anxiety provoking. One would want to avoid classroom settings emphasizing competition on examinations and rigid conformity. Freedom to explore and the acceptability of exploration is desirable. Secondly, the preschool and elementary school years may be the best time to develop the capacity to learn through exploration. There is more time available for free exploration. Finally, the earliest learning presumably affects subsequent development profoundly. Research and theory about

curiosity motivation point to a number of tactics that could be implemented in schools to foster self-directed learning. These include the development of cognitive beliefs about the appropriateness of exploration, the use of situations and materials that provoke curiosity, and an organizational flexibility that makes exploration possible without anxiety, especially early in the school years.

Competency Motivation

White (1959), in an influential reanalysis of the concept of motivation, drew on a variety of earlier theories. He argued that simple drive theory with its emphasis on behavior arising from deficit and terminating with a consummatory response fails to explain most human behavior. For example, Berlyne's conclusion that curiosity is another type of drive, analagous to hunger or thirst, appears inconsistent with the persistence of curiosity behavior, its quick recovery, and its resistance to extinction. There is also a fundamental conceptual incompatibility in attempting to connect reinforcement of exploratory behavior with the reduction of need.

Instead, White concluded that evidence such as Piaget's systematic documentation of spontaneous, playful exploration in very young children suggests a generalized motivation to deal effectively with the environment. He labeled this motivation "effectance" and suggested that it energizes exploratory behaviors that "...have a common biological significance (as) part of the process whereby an animal or child learns to interact with his environment" (p. 329). In other words, spontaneously and early in life children set about attempting to master their environment. Competency motivation, then, addresses most of all the attribute of learner self-acceptance. However, much of the evidence cited by White refers to motor activity rather than to learning in the classroom, as Sears (1967) noted.

Peters (1976) constructs a bridge to cognitive functioning with the concept of *rationality*. Like White, Peters argues that curiosity and exploration are not explained by Berlyne's drive reduction hypothesis. Also like White, Peters grounds his analysis on Piagetian theory. He suggests that rational individuals conform to three internalized norms: (1) a concern for consistency and avoiding contradiction leading to resolution of conflicts between existing beliefs and discrepant experience or information and choosing means consistent with ends; (2) a clearly defined sense of which considerations are relevant in the formulation of beliefs and in the making of choices; (3) active inquiry and a critical ability leading to verification of assumptions

against new experience through a deliberate search for evidence.

Although broader in scope, Peters' concept of rationality incorporates self-direction in thought and action. Building on Piagetian concepts, Peters redefines the concepts of assimilation and accommodation in accounting for the development of rational behavior. *Assimilation* refers to "... the constructive, classifying aspect of thought, the tendency to impose a conceptual scheme on experience and to generalize on the basis of similarities", while *accomodation* represents a demand for consistency, "... the tendency to dwell on the novel or the discrepant and to adapt one's beliefs and assumptions accordingly" (p. 143). Assimilation and accommodation, redefined, are the fundamental human dispositions underlying the development of rationality. Although the terminology is rather different, rationality presumes competency. There is the same emphasis on active exploration and mastery of the environment (in this case through verified knowledge) that White finds at the motor or task level.

Unfortunately, Peters says nothing about the influence of schooling in the development of rationality, but his ideas about human development suggest the use of discovery and experiential learning strategies. White's concept of competency, also devolving from an attempt to establish a motivational basis for curiosity and exploratory behavior, suggests educational applications that differ somewhat from those of Berlyne, who stresses novelty and cognitive conflict as enhancers of curiosity. While these tactics would in no way conflict with educational approaches derived from the competency hypothesis, the latter also suggests that learners should have meaningful success experiences leading to the development of self-acceptance and esteem.

This connection is explicitly made in Keifer's (1973) longitudinal study of 7 to 13 year old school children. Over time, children in high vs. low achieving groups became increasingly divergent on measures of self-esteem, self-concept of ability, and locus of control (extent to which accomplishment is attributed to one's own efforts rather than to someone else or simply to luck). Keifer maintains that instruction and evaluation are processes that can develop a sense of personal competency in learners. "Instructional strategies ... should ... maximize the probability that each student feels a sense of accomplishment. Teachers ... should not choose (strategies) which insure that only a few students feel competent ..." (p. 11).

Blaney et al. (1977) taught fifth grade children to serve as peer tutors in small learning groups. Tutors were responsible for learning material themselves and then teaching others. This research demonstrated not only that the experimental (tutoring) groups, as compared to the control groups,

improved interpersonal skills, but also that their self-esteem as learners increased significantly. Most important, cooperative learning in the tutorial groups differed from the usual situation in which self-esteem (or lack of it) is defined through competition with others. Under competitive conditions outcomes for individuals inevitably differ and only a few learners will develop a sense of personal competency.

The competency motivation hypothesis and Peters' (1976) related concept of rationality thus suggest that opportunity for exploration should be provided in educational contexts structured so as to stimulate curiosity. Going beyond curiosity, the theory of competency emphasizes the significance of self-esteem. Educational environments should be structured so as to assure meaningful success to as many learners as possible.

Attribution Theory and Personal Causation

Attribution theory, like the related competency motivation hypothesis, attempts to explain purposive, rational behavior. First formulated by Heider (1958), attribution theory deals with how people make causal interpretations that are *external* (attributed to influences other than one's own efforts) vs. *internal* (attributed to one's own efforts and abilities). Winer (1972) holds that to label actions as "intentional" presupposes internal attribution. Attribution theory deals with intrinsic motivation.

Attribution theory has been successfully applied by Winer and others to the concept of need achievement. In simplest terms, Winer (1972) reports that high achievers attribute success to their own abilities and efforts. When such people fail, they see it as the result of their own lack of effort. Both of these types of attributions are internal. In contrast, low achievers attribute success to the easiness of the task or to good luck. Failure is attributed to task difficulty or bad luck. These are external attributions. Winer and Kukla (1970) proposed that high achieving people are more likely to approach demanding situations because they will be able to attribute success to their own efforts, making attainment more rewarding. Such individuals also persist longer in the face of failure, seeing it as due to lack of effort rather than to lack of ability.

There have been a number of significant attempts to develop internal attribution in the school context, the most ambitious of these by de Charms (1972 and 1976). De Charms refers to his work as "personal causation training". He distinguished between the learner who sees the self as an *origin*, intending and originating behavior (the self as the locus of causality)

and the *pawn*, in whom the self is perceived as controlled by external forces or events.

De Charms and his collaborators conducted a four year study of a cohort of children during their fifth to eighth grade years (ages 11 to 14). In the initial phase teachers were trained to (a) encourage goal setting in their students, (b) allow the students to determine the manner in which goals were to be pursued, (c) stress realistic perceptions of goal setting, (d) develop an atmosphere in which students could take personal responsibility for their actions, and (e) instill self-confidence in students. The teachers were also trained to perceive themselves as origins rather than as pawns. In this regard de Charms (1972) reports that by the fourth year of the research 35% of the trained teachers had advanced professionally as compared to a control group figure of only 5%.

The curriculum for students incorporated an ingenious variety of games involving goal setting, keeping records of accomplishments, and even direct instruction in the origin/pawn distinction. Overall, the training was found to affect positively the behavior of teachers in the classroom, the children's perceptions of themselves on a variety of measures, and also academic achievement of the trained students. The relevance of the origin/pawn concept to self-direction is illustrated by the way in which stories written by the students were scored for evidence of origin behavior: (a) internal goal setting; (b) internal determination of instrumental activity; (c) reality perception; (d) personal responsibility; (e) self-confidence; and (f) internal control.

Müller-Wolf (1974) has assessed both primary (family) and secondary (schooling) socialization variables in relating origin behavior to lifelong learning. He concludes that "... teacher behavior characterized by approval, social flexibility, understanding and encouragement of independence, and an origin climate in teaching (promote) intrinsic motivation, responsibility, initiative, and self-realization..." (p. 88). (These conclusions, while plausible, may be somewhat strongly stated given the correlational rather than experimental nature of Müller-Wolf's data.)

Bar-Tal (1978) summarizes recent applications of attribution theory. Several "attributional retraining" studies appear to confirm that children can be trained to shift from external to internal attribution, at least within a given situation. For example, Chapin and Dyck (1976) found that, after attributional retraining, reading-deficient children became significantly more persistent in their reading. Dweck (1975) trained a group of children whose classroom behavior consistently manifested symptoms of extreme helplessness in the face of failure. Initially, these children were unwilling to persist

when unsuccessful. They also attributed both success and failure to external factors. After training (solving math problems for token rewards while receiving verbal feedback attributing both success and failure to effort) the children showed highly significant improvements in persistence and success rate. They also internalized attribution of success and failure. Finally, Dweck (1975) found that "... verbal reports from the teachers ... indicated that the subjects in the Attribution Retraining Treatment had begun to work harder and to develop a different attitude toward failure" (p. 684).

Bar-Tal (1978) concludes that teachers can encourage children to develop internalized attributions by (a) helping them to achieve realistic perceptions of their own abilities, (b) reinforcing effort, and (c) explicitly emphasizing, through feedback, internalized attributions of causality. Personal causation training programs modeled after de Charms (1976) also offer promise. Bar-Tal further suggests that individualized instruction is the most suitable context for this kind of training.

Non-experimental research on adult behavior approaches the problem from a different direction. For example, Bergsten (1977) looked into the relationship between early experience and voluntary adult learning. While adults who voluntarily participated in continuing education had some family factors in common, his own and other research failed to show that previous educational experiences had any relationship with such participation. "It is not a question of negative school experiences, but rather a perception of education as something that cannot affect or change their life situation" (p. 126). Adults who take advantage of educational opportunities, Bergsten found, see themselves as able to (a) influence decisions on the job, (b) use their full capacities and skills, and (c) decide on work tasks. In other words, they think of themselves as origins. They also perceive education as something that can be used to affect their own lives. These findings raise the important question of why some learners come to see schooling as relevant to accomplishment in life, while others do not. Attribution theory suggests that the latter may never have discovered (or were prevented from discovering) their own instrumental role as learners and schooling as a tool in the growth process.

Humanistic Theory

More fully than any other theoretical perspective, humanistic theory deals with concepts that relate directly to attributes of self-directed learning. Rogers' (1959) statement remains the most comprehensive and analytical

psychological treatment in the humanist tradition. According to Rogers, all human motivation is derived from a basic *actualizing tendency*, or tendency of the organism to develop its capacities, including effectiveness in dealing with all aspects of the environment, and in the direction of *autonomy* or freedom from the control of external forces. In emphasizing these principles of development, humanistic theory is in some ways compatible with competency motivation and personal causation.

Other concepts relevant to self-direction are also incorporated in Rogerian theory. *Openness to experience* is the polar opposite of defensiveness, which shuts out new experiences. It pertains for situations in which the individual perceives that nothing threatening the self will occur. *Positive self-regard* denotes a "... positive regard satisfaction which has become associated with a particular self-experience or a group of self-experiences, in which this satisfaction is independent of positive regard transactions with social others (and) ... the individual ... becomes his own significant other" (p. 209). Positive self-regard derives from experiences with others, but ultimately becomes selfsustaining, according to the theory. Finally, *locus of evaluation* denotes whether the sources of evidence as to values are internal or external. Taken together, these humanistic concepts are closely related to the self-directed learning attributes of self-acceptance, intrinsic motivation (from self-actualizing), internalized evaluation, openness to experience, flexibility (a new way of learning is new experience), and autonomy.

The humanistic ideal is Maslow's *self-actualizing* person, or in Rogers' (1959) terms, ".. a person-in-process, a person continually changing" (p. 235). Rogerian conceptions of therapy and personality theory culminate in the self-actualized, rather than the "normal" person. In this sense, the theory is as much a theory of education as it is a clinical or personality theory. In considering educational implications, Rogers (1959) transposes conditions of therapeutic and interpersonal relationships (e.g., "empathic understanding of internal frame of reference") to the relationship between teacher and student. Likewise, certain therapeutic outcomes are desirable outcomes of any educational process, but particularly one that values self-direction. For example, both the therapeutic and the educational process work toward developing more realistic and differentiated perceptions of the self, more effective problem-solving, and perception of the "... *locus of evaluation* and the locus of choice as residing within the (self)" (p. 218).

Unfortunately, there is a considerable gap between the abstractions of Rogerian theory and the everyday world of the classroom. Aspects of the theory which cannot be discussed here could lead, especially if naively

applied, to a stance of bland, accepting neutrality on the part of teachers, with external incentives such as praise for accomplishment (or censure for non-accomplishment) completely ruled out.

Later educational applications confirm the importance assigned to internal as compared to external evaluation. A number of examples cited by Rogers (1969) involve goal setting and self-evaluation by the student. A reasonably rigorous experimental study by Maher and Stallings (1972) yielded at least some results supporting conditions of internal evaluation, although not all of the findings were positive. Under conditions of internal evaluation, higher socio-economic status children and high need achievement children of lower socio-economic status showed greater preference for difficult, as opposed to easy, problem solving tasks. These subjects were also more willing to continue working on such problems beyond the initial time alloted. Under external evaluation, however, performance tended to be more accurate on easy tasks. The authors speculated that the greater accuracy attained under conditions of external evaluation might be achieved at the cost of decreasing task motivation, especially for learners high on achievement motivation.

The learner's locus of evaluation has thus been the focal point in applications of humanistic theory to the classroom or experimental learning situation. It can be deduced that the key to the development of self-direction from this theoretical perspective lies in encouraging learners to set their own achievement goals and evaluate their own performance with respect to those goals. "The evaluation of one's own learning is one of the major means by which self-initiated learning becomes also responsible learning ... the individual has to take the responsibility for deciding what criteria are important to him ... what goals he has been trying to achieve, and the extent to which he has achieved these goals ..." (Rogers, 1969 , pp. 142-143).

Learning modes and environments

This review has focused on theories about learning and related educational practices. However, there is an alternative literature that begins with practice itself. Certain modes of learning or ways of structuring educational environments have been studied because they appear to have desirable potential, especially in comparison with traditional practices. Four of these deserve mention because they have, in part, been explicitly associated with self-direction.

Experiential Learning

"Experiential learning", according to Chickering (1976) is "... learning that occurs when changes in judgments, feelings, knowledge, or skills result ... from living through a particular event" (p. 63). Chickering believes this kind of learning makes it possible for learners to perceive themselves as origins and to experience a sense of personal causation. Coleman (1976) suggests that experiential learning presumes intrinsic motivation and develops self-assurance and a sense of accomplishment.

The school is a relatively recent invention in human society. Older methods of teaching the young often emphasized direct experience rather than abstract instruction. Lee (1967) reports on two tribes, one African and one North American Indian, in which adults continuously involved themselves in children's learning, though in a way that left the experience of "finding out" up to the child. Adults arranged events, asked questions about experiences, and criticized performance, but avoided interfering with the personal experiences that led to learning. Greenfield and Bruner (1968) contrasted the way children learned in two African tribes. In one, children who had not had Western schooling were slow in developing both conservation and various aspects of operational thought. Traditional teaching in this culture was fully didactic, with children given answers rather than being encouraged to find out for themselves. Children in the second tribe grew up in an atmosphere encouraging personal experience. They developed conservational thought earlier than in the first tribal culture. They were able also to think operationally in ways that the latter could not.

Discovery Learning

Learning by discovery is experiential learning brought into the classroom and focused particularly on the solution of problems or discovery of principles. Cronbach (1966) characterized teaching by discovery as inductive teaching, in contrast to didactic or directive teaching. He noted, among a number of other potential outcomes of successful discovery learning, "*heuristics*" or the ability to solve general problems in a discipline by acquiring search and information processing behaviors and *interest* manifested in greater concentration and effort during learning.

Kagan (1966) identified limitations on the situations in which discovery learning can be used, e.g., inappropriate with children who have not attained the stage of formal reasoning, with poorly motivated or low I.Q. children,

and with impulsive learners who jump to inaccurate early conclusions. Empirical work on discovery learning has attempted to assess, as did Werdeling et al. (1971), the extent to which discovery learning promotes better retention and generalization. Discovery learning has the same connections to competency motivation and personal causation as does the broader category of experiential learning.

The Open Classroom

The "open" classroom is certainly the most familiar reformist response to radical criticism of the school. In a study comparing the behavior of exploratory vs. cautious children in open classrooms, Minuchin (1976) described open schools as places in which

> "... Space and time are flexibly arranged; multiple materials allow for a variety of activities and experience; the teacher functions in an individual relationship with children and is available as resource and guide; the peer group is seen as an important context for learning activities; and the learner is in a position to make choices, use resources independently, and interact freely with other children and teaching adults" (p. 2).

In Minuchin's research exploratory and cautious children were compared on several measures of self-direction. Surprisingly, these two groups were quite similar in persistance at work, and three types of "autonomous" behavior: selection of learning activities, use of resources, and implementation of classroom procedures. The two groups did differ on a measure of the tendency to develop and extend learning activities, with exploratory children scoring higher. Overall, these findings suggest that cautious, as well as exploratory, children show self-directed learning behavior in the open classroom. While concluding that children appear to be much more self-directed in open as compared to traditional classrooms, Minuchin lacked comparative data. Wilson et al. (1972) did make such comparisons. These investigators found differences between students in open and traditional schools, but, as in too many other studies, confined their measures to psychological tests rather than basing them on observations of actual behavior.

The open school provides a highly flexible environment. Presumably any of the theoretical perspectives could be implemented to some degree in an open school, and even perhaps all in the same school. In addition to flexibility, open classrooms allow learners to practice various aspects of self-direction, as Minuchin found. Schools that do not permit learners to

make choices obviously cannot provide for such practice. Minuchin's research addresses the important question of whether or not different types of learners will show signs of self-direction in open learning contexts, although this question certainly begs for further study. Most important, whether children who are self-directed in the open school context will behave in the same way out of school or later in life is a question that has not yet been addressed at all.

Structured Individualization

The open school in its most unstructured form allows so much permissiveness and freedom that Marbeau (1976) might not consider it schooling at all. But the use of individualized approaches to instruction is not confined to the open classroom. Much more structure is built into a number of fully developed, comprehensive instructional packages such as the system of individually guided motivation described by Klausmeier et al. (1975), which emphasizes self-direction. This system uses teacher/student conferences to set goals and monitor accomplishments. Peer tutoring is extensively used, and learners also record their accomplishments on goal checklists. Teachers use reinforcement, feedback, and reasoning to enhance motivation (Klausmeier et al., 1970). These techniques are compatible with self-reinforcement theory.

Wang and Stiles (1976) studied self-direction ("self-responsibility") in relation to another structured, individualized program incorporating both "prescribed" and "exploratory" learning components. An experimental group of learners were allowed to choose their own exploratory learning content and given full control over the scheduling of all of their learning activities, both prescribed and exploratory. A control group had choice of neither content nor time. At the end of the 20 week period of the study children in the experimental group were found to score higher in self-responsibility as determined in a structured interview, e.g., sense of control over the learning environment or ability to evaluate their own learning. In addition, very significant differences in the number of tasks completed occurred in favor of the self-scheduled as compared to control condition.

Structured individualized programs are probably most compatible with theories emphasizing self-reinforcement. However, these kinds of instructional environments are just as amenable to instructional tactics which elicit self-direction as are other modes of teaching and learning. Tactics may differ, but what children learn about managing their own learning may be

rather similar. Thus, it may be that children who, in a structured environment, are taught formally how to set their own goals and monitor their own progress actually learn these activities through modeling others, or develop a sense of personal competency, or even learn to perceive themselves as causal agents.

Conclusion

In addition to its participants and its physical plant, a school is an environment created by certain principles of organization and modes of practice. If self-direction in learning is significantly influenced by one kind of schooling or another, the presumption is that this occurs because there is some sort of consistency – irrespective of content and level – in how learners are expected to go about the learning process. Only comprehensive theoretical perspectives can provide such consistency.

The experimental and other empirical research cited in this review to illustrate how each theoretical perspective has been applied to the learning situation is often encouraging, though hardly conclusive. It is also encouraging that all of the attributes of self-direction listed at the beginning are dealt with by one or more of the theories. Hypothesis testing experimental studies in laboratory situations or in real schools have been informative. But examples of longer term research are significantly lacking. Case studies of schools designed to enhance self-direction are needed. Such studies would show how teachers and students actually behave in school contexts organized under various theories about the origins of self-direction. While case studies do not provide final proof, they are an excellent source of hypotheses for testing through controlled research strategies. Equally important, but more difficult to accomplish, are long term studies of learners of different types who have been exposed to various school environments. This kind of longitudinal research is the most difficult of all because of its costs in time and resources. But it may be the only way to establish a firm link between schooling and self-directed learning in adult life.

NOTES

1. This review is a part of a multinational research project, "Lifelong Education and the School: Organizing the Learning Process to Enhance Self-Direction," (Project 4.17), currently being conducted by the Unesco Institute for Education.

2. Regrettably, limitations in space prohibit the examination of all of the research related to the theories that will be identified. Preference has been given to more recent work or work that illustrates the relationship between each theory and self-direction in learning. In addition, this article is written from a perspective that draws primarily from the psychological literature rather than that of sociology or anthropology.

REFERENCES

BANDURA, A. *Psychological modeling: Conflicting theories.* New York: Aldine-Atherton, 1971.

BANDURA, A. "Self-reinforcement theory: Theoretical and methodological considerations". *Behaviorism*, 4, (1976), pp. 135-155.

BANDURA, A. "The self system in reciprocal determinism". *American Psychologist*, 33 (1978), pp. 344-358.

BANDURA, A. and PERLOFF, B."Relative efficacy of self-monitored and externally imposed reinforcement systems". *Journal of Personality and Social Psychology*, 7, (1967), pp. 111-116.

BANDURA, A. and WALTERS, R.H. *Social learning theory and personality development.* New York: Holt, Rinehart & Winston, 1963.

BAR-TAL, D. "Attributional analysis of achievement-related behavior". *Review of Educational Research*, 48 (1978), pp. 259-271.

BERGSTEN, U. *Adult education in relation to work and leisure.* Stockholm: Almqvist & Wiksell International, 1977.

BERLYNE, D.E. "Curiosity and education". In Krumboltz J.D. (ed.): *Learning and the educational process.* Chicago: Rand McNally, 1965.

BLANEY, N.T., STEPHAN, D., ROSENFIELD, D., ARONSON, E., and SIKES, J. "Interdependence in the classroom: A field study". *Journal of Educational Psychology*, 69 (1977), pp. 121-128.

CHAPIN, M., and DYCK, D.G. "Persistence of children's reading behavior as a function of N length and attributional retraining". *Journal of Abnormal Psychology*, 85 (1976), pp. 511-515.
CHICKERING, A.W., "Developmental change as a major outcome". In Keeton M.T., and Associates, Editors: *Experiential learning.* San Francisco: Jossey-Bass, 1976.

COLEMAN, J.E. "Differences between experiential and classroom learning". In Keeton, M.T. and Associates, Editors: *Experiential learning.* San Francisco: Jossey-Bass, 1976.

CRONBACH, L.J. "The logic of experiments on discovery". In Schulman, L.S. and Keislar, E.R.: *Learning by discovery: A critical appraisal.* Chicago: Rand McNally, 1966.

DE CHARMS, R. "Personal causation training in the schools". *Journal of Applied Social Psychology*, 2 (1972), pp. 95-113.

DE CHARMS, R. *Enhancing motivation.* New York: Irvington Publishers, 1976.

DECI, E.L. "Effects of externally mediated rewards on intrinsic motivation". *Journal of Personality and Social Psychology*, 18, (1971), pp. 105-115.

DECI, E.L. "Intrinsic motivation, extrinsic reinforcement and inequity". *Journal of Personality and Social Psychology*, 22 (1972), pp. 113-120.

DWECK, C.S. "The role of expectations and attributions in the alleviation of learned helplessness". *Journal of Personality and Social Psychology*, 31, (1975), pp. 674-685.

FELIXBROD, J.J., and O'LEARY, D. "Effects of reinforcement on children's academic behavior as a function of self-determined and externally imposed contingencies". *Journal of Applied Behavioral Analysis*, 6 (1973), pp. 241-250.

GLYNN, E.L., THOMAS, J.D., and SHEE, S.M. "Behavioral self-control of on-task behavior in an elementary classroom". *Journal of Applied Behavioral Analysis*, 6 (1973), pp. 103-105.

GREENFIELD, P.N., and BRUNER, J.S. "Culture and cognitive growth". In Goslin, D.A. (ed.): *Educability, schools, and ideology*. London: Croom Helm Ltd., 1974.

HARGREAVES, D.H. "Deschoolers and new romanties". In Flude, M. and Ahier, J., Editors: *Educability, Schools and Ideology*. London: Croom Helm, 1974.

HASKETT, G.J., and LENFESTEY, W. "Reading-related behavior in an open classroom: Effects of novelty and modeling on preschoolers". *Journal of Applied Behavioral Analysis*, 7 (1974), pp. 233-241.

HEIDER, F. *The psychology of interpersonal relations*. New York: Wiley, 1958.

HENDERSON, R.W., SWANSON, R., and ZIMMERMAN, B.J. "Training seriation responses in young children through televised modeling of hierarchically sequenced rule components". *American Educational Research Journal*, 12, (1975), pp. 479-489.

KAGAN, J. "Learning, attention, and the issue of discovery". In Schulman, L.S. and Keislar, E.R.: *Learning by discovery: A critical appraisal*. Chicago: Rand McNalley, 1966.

KEIFER, E. *The effects of school achievement on the affective traits of the learner*. Paper presented at the annual meeting of the American Educational Research Association, New Orleans, February, 1973.

KLAUSMEIER, H.J., JETER, J.T., QUILLING, M.R., FRAYER, D.A., and ALLEN, P.S. *Individually guided motivation*. Madison, Wis.: Wisconsin Research and Development Center for Cognitive Learning, 1975.

KLAUSMEIER, H.J., SORENSON, J.S., and SCHWENN, E.A. *Individually guided motivation: Goal-setting procedures to develop student self-direction and prosocial behaviors*. Paper read at the annual convention of the American Educational Research Association, Minneapolis, 1970.

KREITLER, S., KREITLER, H., and ZIGLER, E. "Cognitive orientation and curiosity". *British Journal of Psychology*, 65, (1974), pp. 43-52.

LANGEVIN, R. "Is curiosity a unitary construct?" *Canadian Journal of Psychology*, 25 (1971), pp. 360-374.

LEE, D. "A socio-anthropological view of independent learning". In Gleason, G.T. (ed.): *The theory and nature of independent learning*. Scranton, Pa.: International Textbook Company, 1967.

LEPPER, M.R., GREENE, D., and NISBETT, R.E. "Undermining intrinsic interest with extrinsic reward: A test of the 'overjustification' hypothesis". *Journal of Personality and Social Psychology*, 28 (1973), pp. 129-137.

LEPPER, M.R. *Generalized effects of modeled self-reinforcement training*. Final Report, National Institute of Education, NIE Project No. NIE-G-74-0027, 1976.

MAHLER, M.L. and STALLINGS, W.M. "Freedom from external evaluation". *Child Development*, 43 (1972), pp. 177-185.

MARBEAU, V. "Autonomous study by pupils". *Education and Culture*, 31 (1976), pp. 14-21.

MAW, W.H., and MAW, E.W. *An exploratory study into the measurement of curiosity in elementary school children*. U.S. Office of Education, Cooperative Research Project No. 801, 1964.

MINUCHIN, P. *Differential use of the open classroom: A study of exploratory and cautious children*. National Institute of Education, NIE Report No. NIE-G-00-3-0013, 1976.

MÜLLER-WOLF, H.M. "Motivational and emotional correlates of lifelong learning – The impact of primary and secondary socialization". *Scientia Paedagogica Experimentalis*, 74 (1974), pp. 67-94.

PETERS, R.S. "The development of reason". In Benn, S.I. and Mortimore, G.W. (eds.): *Rationality and the social sciences: Contributions to the philosophy and methodology of the social sciences*. London: Routledge & Kegan Paul, 1976.

ROGERS, C.R. "A theory of therapy, personality, and interpersonal relationships, as developed in the client-centered framework". In S. Koch (ed.): *Psychology: A study of a science*, Volume 3. New York: McGraw-Hill, 1959.

ROGERS, C. *Freedom to learn*. Columbus, Ohio: Charles E. Merril, 1969.

SAGOTSKY, G., and LEPPER, M.R. "Generalization of changes in children's preferences for easy or difficult goals induced by observational learning". In Lepper, M.R.: *Generalized effects of modeled self-reinforcement training*. Final Report, National Institute of Education, NIE Project No. NIE-G-74-0027, 1976 (pp. 20-30).

SAGOTSKY, G., PATTERSON, C.J., and LEPPER, M.R. "Effects of training in self-monitoring and goal-setting techniques on classroom study behavior and academic performance". In Lepper, M.R.: *Generalized effects of modeled self-reinforcement training*. Final Report, National Institute of Education, NIE Project No. NIE-G-74-0027, 1976.

SEARS, P. "Implications of motivation theory for independent learning. In G.T. Gleason (ed.): *The theory and nature of independent learning*. Scranton, Pa.: International Textbook Co., 1967.

SKAGER, R.W. *Lifelong learning and evaluation practice*. Oxford: Pergamon Press and the Unesco Institute for Education, 1978.

SWITZKY, H.N., HAYWOOD, H.C., and ISETT, R. "Exploration, curiosity, and play in young children: Effects of stimulus complexity". *Developmental Psychology*, 10 (1974), pp. 321-329.

THORESEN, C.E., and MAHONEY, M.J. *Behavioral self-control*. New York: Holt, Rinehart and Winston, 1974.

TOUGH, A. *The adult's learning projects*. Ontario: The Ontario Institute for Studies in Education, Research in Education Series No. 1, 1971.

VIDLER, D.C. "Curiosity". In S. Ball (Ed.): *Motivation in education*. New York: Academic Press, 1977.

WANG, M.C., and STILES, B. "An investigation of children's concept of self-responsibility for their school learning". *American Educational Research Journal*, 13 (1976), pp. 159-177.

WEINER, B. *Theories of motivation*. Chicago: Markham, 1952.

WEINER, B., and KUKLA, A. "An attributional analysis of achievement motivation". *Journal of Personality and Social Psychology*, 15 (1970), pp. 1-20.

WERDELIN, I., BONDESSON, E., and LARSSON, G.B. "The effectiveness and transfer value of two methods of concept learning". *Scandinavian Journal of Psychology*, 12, (1971), pp. 198-204.

WHITE, R.W. "Motivation reconsidered: The concept of competence". *Psychological Review*, 66 (1959), pp. 297-333.

WILSON, F.S., LANGEVIN, R., and STUDKEY, T. "Are pupils in the open plan school different?" *Journal of Educational Research*, 66 (1972), pp. 115-118.

WITTROCK, M.C. "The cognitive movement in instruction". *Educational Psychologist*, 13 (1978), pp. 15-29.

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NOTE - BERICHT - COMMUNICATION

BARANGAY HIGH SCHOOLS FOR COUNTRYSIDE DEVELOPMENT[1]

Introduction

The Barrio (now Barangay) High School movement was started by the author in the barrio of Bactad, in Urdaneta, Pangasinan, in June 1964. There are now 2,000 of these high schools, scattered all over the country, with a total enrollment of about 330,000 students. The movement was designed to help the 5 million unemployed primary school leavers, most of whom come from the barrios, to continue their education and, at the same time, to promote the development of the countryside.

This followed the opening of municipal high schools, of which there are now 500 in the Philippines – enrolling about 1 million students – the first one of which was also established in Urdaneta, in a bombed-out church in 1945, after World War II. Before that time there was only one high school in every province, and this writer often had to walk the 50 km. from Bactad, Urdaneta to Lingayen, to the only high school in the province. Whereas then there were only 1,000 students in the Pangasinan Provincial High School, now there are more than 6,000 in Urdaneta alone, half in the Urdaneta National High School and the other half in the 20 Barangay High Schools.

Had it not been for these developments and the opening of 75 community colleges, 1,000 pre-school classes, and a large number of multigrade schools, which were also founded by this writer in Urdaneta, there would be 9 million unemployed school leavers in the Philippines, instead of the 7 million recently estimated by Minister Juan L. Manuel.

International Recognition

The Barangay High School is recognized all over the world. At the last meeting of the World Council for Curriculum and Instruction (WCCI), held in Istanbul, the present writer was invited to explain how these schools operate, and, as a result, the WCCI decided to meet in the Philippines in 1980 to enable the delegates to see the movement and the other innovations

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in operation, at little or no extra cost to the government. A short time ago an Indonesian educator, Dr. Abdul Mavah Akhmad, undertook a case study of a Barangay High School in Bolalacao, Iloilo, in order to determine its contribution to manpower development. In his conclusion Akhmad said:

> "From the survey, 99% of the parents assert that school programs have helped develop employable skills among their children specially in gardening, scientific agriculture, livestock raising, cooking, selling, sewing, and carpentry ... Out-of-school youth activities and community projects in cleanliness and sanitation, and sports activities are cooperative undertakings of the school and community... It is evident that this Barangay High School, as it is operating, is directly contributing to the social and economic development of the village (of Bolalacao). Clear indications are the work skills that are used by the students during and after their studies in school, and the community cohesiveness and participation that the school activities generate."[2]

The Bactad Barangay High School

To show in greater detail how the Barangay High Schools are contributing to rural development, we now refer to the current curriculum, started two years ago, of the Bactad Barangay High School which, as already indicated, was the first school of this type in the Philippines.

First of all, the school curriculum includes both the formal subjects and related non-formal activities, and all the people in the community – pupils, parents, and those who have left school, and barangay leaders – are involved in such activities.

1. *The formal school curriculum* includes the usual list of courses such as communication skills (English and Philippino), mathematics, science, social studies, practical arts, home economics, etc.

2. *Non-formal education* comprises the raising of pigs and poultry, rice, corn and green vegetable production, planting nutritive foods in yards and farms, improvising science equipment, etc. These activities are coordinated by an Agricultural Extension Worker who relates them to the formal school subjects.

3. *Earning while learning activities :* (a) 29 students in years 1-4, each earn ₱30 a month by Baracbac weaving ; (b) other students undertake *food production* in the school yard and at home. From the sale of produce such as beans, okra and ampalaya in the town market they each earn about ₱12 a month.

4. *YCAP (Youth Countryside Action for Progress) activities in environmental sanitation* is an on-going project all year round for everyone – students, parents, barangay leaders, and children who have left school. It involves : (a) provision of rubbish containers at home – garbage is re-cyc-

or fed to pigs, chickens, and cows and carabaos or composted into fertilizer; (b) construction and repair of fences in every home and in the school compound – three times a week the students go out to their homes to repair their fences; (c) construction of drainage systems – widening and deepening of canals everywhere in the area; (d) planting ornamental and fruit-bearing trees in school and at home; (e) improvement of toilet facilities at home and in school, where the urine and waste matter are treated and used separately to fertilize the plants. As a result, no home is without a sanitary toilet.

As an example of further non-formal activities, Bactad Barangay High School serves as a church on Sundays, from 7 to 8 in the morning. This project was started in 1969 with the approval of the then Director of Public Schools. Two of the rooms are combined and used by a priest to say mass. His sermon usually deals with the teacher's responsibility for character development. Since the church was established in Bactad, seven other barrios in Urdaneta have followed suit.

There is also a Youth Development Training Program – YDTP – designed to discover students' interests and aptitudes in different fields: scouting, dancing and singing, playing musical instruments such as the guitar, bandoria, piano, etc.

Bactad proper, where the school is, has a total population of only 1608, 115 of whom are farmers, cultivating 1.28 hectares of land each. There are 247 students in the high school: first year, 70; second year, 68; third year, 56; and fourth year, 55. Practically all primary school leavers in Bactad and in nearby sitios are back in school. They are taught by five full-time and three part-time teachers. Teachers' salaries and other expenses are paid from tuition fees and other contributions by the barangay plus, since a year ago, a significant amount of National Funds, i.e. of the total 1978 budget of ₱30,092.07 the national contribution was ₱7,426.32.

The goals and objectives of the above program were pursued on the basis of the following strategies:

1. *Planning stage* : (a) conference with barangay officials ; (b) survey of the Barangay for baseline information ; and (c) plan of activities to be performed by different groups.

2. *Preparation stage* : (a) creation of different committees to implement the program, i.e. making dustbins, repairing fences, widening and deepening drainage canals, planting trees, etc.

3. *Implementation stage* : (a) Barangay people provide the materialn me. dustbins, fencing material such as bamboo and wood ; (b) assignments of different jobs to pupils, school leavers and adults ; (c) evaluation of performance of each group and indication of further improvement needed ;

and (d) final reporting of achievements to the Division of Superintendent of Schools through the Principal and District Supervisor.

It goes without saying that different barangays vary in their resources, problems and needs, and consequently, different barangay high schools develop different curricula. The Divisional Office personnel meet with representatives of these high schools and plan together what to do and how they can help one another. What is important is that each high school contributes towards the development of the barangay – economically, culturally, socially, and morally. This is in effect the Ministry of Education and Culture's 5-year Barangay High School project which was started a year or so ago. The idea is to establish one such school, as a pilot project, in each region. In Region I, notably in Pangasinan, the Barangay High Schools have been encouraged to go on with the work and not to wait for the report of the pilot project.

Incidentally, in Urdaneta the municipal government has recently adopted a program designed to improve the quality of life of the town's young people who have left school. Called Municipal Integrated Non-Formal Education, this program will have the following objectives:

1. To offer on an extensive scale different courses of non-formal education which are geared towards the betterment of the quality of life of young school leavers;
2. To coordinate the different agencies directly involved in the non-formal education activities in the municipality; and
3. To maximize the utilization of manpower, material and financial resources in carrying out the program of non-formal education.

The project will be related to that of the Barangay High Schools and will be implemented by a Board of Directors, with the Mayor as honorary chairman, and members from different groups such as educators, hotel managers, and representatives of the Ministry of Social Services, of the Office of the local Population Commission, and of the Ministry of Agrarian Reform.

Summary and Concluding Statement

It is said that if Mohammed will not go to the mountain, the mountain must come to Mohammed. Similarly, if barrio or barangay people cannot go to high school, the high school must come to the barrio. This is the situation in more than 2,000 barrios or barangays of the Philippines today, where 60,000 graduate each school year. In Urdaneta, where there are 20 of these high schools, everyone of the graduates of the 40 barrio or barangay schools can go to a high school located within walking distance from home.

How did this happen considering that the government is not in a financial position to support adequately the six-grade elementary school or even the four-year primary school, which is compulsory and free? Although this is explained in more detail in a volume entitled *Self-Help Barangay High Schools*,[3] the main factors are:

1. By exploiting to the full the existing educational facilities in the barrio elementary schools, it has been possible to open one, two or more high school classes. This was done by making use of the rooms, equipment and facilities when not in use by the elementary pupils. For example, when a fourth-grade class is out during a 40-minute period of practical arts (for the boys) and home economics (for the girls), their room is used by a first-year class in mathematics or social studies. In the next period, the fifth-grade class is out, and their room is occupied by the same first-year class in science or English.

2. Until only a year ago, support for the barrio high school was provided, not by the government – which, as indicated, cannot afford it – but by the people themselves. The students, as part of their vocational training, engage in money-making projects, such as raising pigs, chickens, cattle or vegetables and fruit, in the school and at home, the income being used to pay their tuition fees, book rental and other school expenses. As already indicated, in the case of the Bactad Barangay High School, the national government has since last school year been contributing a significant amount in order to raise teachers' salaries from ₱250 to ₱500 a month. But the barrio people themselvs still shoulder three-quarters of the budget.

3. The students improvise their science equipment, including microscopes, costing thirty centavos, which can magnify an object one hundred times. In like manner, the students make practical and ethical use of the principles of science, social studies, mathematics, and all the other subjects, instead of merely memorizing them and reproducing them verbatim in their examination notebooks.

4. Community spirit is promoted for the establishment, support and operation of the barrio high school. The barrio council may levy a tax of one cavan of palay for every one hundred cavans threshed by a business firm, half or all of which may go to the support of the high school for the purchase of library books, science equipment which cannot be improvised, etc. Some of the relatively well-to-do families may establish a revolving fund which may be used to purchase piglets to be given to deserving students to raise. After the pig is sold, the student pays back the capital plus 10% interest, and keeps the rest for himself. In this way, if the piglet cost ₱60 and is sold for ₱250 after seven months, the student pays back ₱60 plus ₱6 interest, and

keeps the rest – ₱184 – for himself. He may decide to buy another piglet for ₱60 and use the remaining amount of ₱124 to pay his tuition fee (₱100 a year) and other school expenses.

The Barangay High Schools have several beneficial effects: first, the educational level of the barrio people is raised from the elementary (four to six grades) to the secondary, at little or no extra expense on the part of the government; second, the barrio people become more self-reliant and less dependent upon the government; third, as a result of the barrio people working harder to raise the funds to support their high school, economic development is promoted; fourth, juvenile delinquency is lessened as a result of the young people going to high school instead of being allowed to roam the streets and engage in cattle-rustling; fifth, the holding power of the elementary school is raised and the number of drop-outs correspondingly decreases – the children do not drop out because they have something to look forward to, namely, a high school near home; and finally, as a result, the standard of living of the barrio people is raised by a significant amount.

What has been done in the Philippines in the short span of fourteen years – starting in 1964 with four barrio high schools enrolling fewer than 400 students – to provide high school education for some 330,000 barrio young people in about 2,000 barrios in all parts of the country, can be done elsewhere in developing countries in Asia, Latin America and Africa. All that is needed is imaginative and dedicated leadership to open the eyes of village people to the possibilities that are within their grasp to establish and support their own high schools by the simple process of helping themselves and each other.

NOTES

1. This paper was first read at the Annual Conference of the Philippine Association of Secondary School Administrators, in the Plaza Convention Hall, Zamboanga City on September 19, 1978. The word "barangay" means village.
2. *Innotech Journal*, 1 (1977), No. 4, pp. 84-86.
3. Pedro T. Orata. *Self-help Barangay high schools: The story of students earning their education and preparing themselves for life*. Quezon City: New Day Publishers, Revised Edition, 1978.

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BOOK REVIEWS – BUCHBESPRECHUNGEN ANALYSES BIBLIOGRAPHIQUES

CHEVROLET, DANIEL. *L'université et la formation continue. Signe et sens d'une situation de l'éducation.* Paris: Casterman, 1977.

LABELLE, JEAN-MARIE. *Université et éducation des adultes.* Paris: Les éditions d'organisations, 1977.

CASTAGNOS, JEAN-CLAUDE et ETCHEVIN, CLAUDE. *La formation continue dans l'université. Peut-être mais pour quoi faire?* Grenoble: Presses Universitaires, 1978.

WILLIAMS, GARETH. *Vers l'éducation permanente: un rôle nouveau pour les établissements d'enseignement supérieur.* Paris: Unesco, 1978.

PICHETTE, MICHEL. *L'université pour qui? Démocratisation du savoir et promotion collective.* Montréal: Nouvelle optique, 1979.

PINEAU, GASTON. *Les combats aux frontières des organisations. Un cas d'éducation permanente universitaire.* Montréal: Sciences et Culture, 1979.

Le rapport particulier entre universités et éducation permanente (E.P.) peut se comprendre à l'aide du rapport plus général entre universités et innovation ou mouvement social: les universités produisent rarement l'innovation; elles l'adoptent lentement et précautionneusement et cette adoption est d'abord surtout verbale. L'E.P., comme mouvement socio-éducatif, est née dans les années 50-60 hors des universités et même contre elles, comme front commun très large de formateurs d'adultes disséminés dans des pratiques éducatives dominées: promotion sociale, éducation populaire, animation culturelle, rattrapage, perfectionnement ... Au début des années 70, sous la pression des organismes internationaux, les universités se sont ralliées au mouvement.

Depuis, elles en parlent, elles en parlent beaucoup, du moins du rapport entre elles et lui. Rien que dans le monde francophone, les six titres

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précédents des deux dernières années témoignent du déblocage du discours universitaire sur ce rapport. Discours de légitimation et de spécification, mais servant tout autant, sinon plus, les universités que le mouvement. Car les universités sont en crise et si le mouvement semble un bon moyen de résolution, la jonction ne va cependant pas sans poser elle-même de multiples questions.

1. *Survol international de la situation*

Pour une éducation permanente de masse, universelle, les universités devront changer leur rapport de supériorité en rapports d'interdépendance avec les autres acteurs sociaux; leur ordre de priorité devra être inversé: "en premier lieu les besoins de la société au sens le plus large (faute de quoi, les universités n'obtiendront pas les ressources indispensables); en deuxième lieu, les besoins des étudiants en tant que personnes (faute de quoi, elles n'auront pas d'étudiants); en troisième lieu, les besoins propres à telle ou telle occupation ou profession (faute de quoi les étudiants seront dissuadés et les employeurs n'accorderont pas leur appui); enfin, l'université devra faire valoir les besoins propres à la discipline ou à la matière pour garantir à l'enseignement sa valeur intellectuelle intrinsèque..." Williams, G., p. 164). Coopération, pertinence, tels sont les deux premiers principes des quatre qui définissent "la nouvelle forme de vie" à laquelle doivent travailler les universités qui veulent aller "*Vers l'éducation permanente, un rôle nouveau pour les établissements d'enseignement supérieur*", selon G. Williams, universitaire anglais éditant à l'Unesco. Les principes de cette nouvelle forme de vie constituent le dernier chapitre de l'ouvrage. Ils ont le mérite d'indiquer le chemin qui reste à faire. Car, les autres, après la traditionnelle entrée en matière sur les raisons d'être de l'E.P. et celle non moins traditionnelle sur la relation évolutive de l'Enseignement Supérieur et de la société, donnent une image assez idéalisée de la situation d'ensemble. La présentation des progrès, projets (chap. III) et des multiples "devraient" des orientations, contenus (chap. IV) méthodes (chap. V), financement (chap. VI, VII), et organisation (chap. VIII), finit par estomper les conditions réelles les plus répandues. Les quelques réalisations d'universités ouvertes, d'universités populaires, d'universités ouvrières et d'universités se différenciant structurellement pour se donner une gamme complète de services adaptés à l'E.P. comme en Suède, risquent de cacher la forêt. D'abord ces réalisations sont moins achevées qu'un survol "unesco" le laisse entrevoir; et ensuite elles ont peu entamé les problèmes centraux de financement coûteux, de corporatisme enseignant, de bureaucratisme académique, de reproduction de domination culturelle qui caractérisent

encore les établissements d'enseignement "supérieur". Rien qu'instituer l'alternance pour le corps enseignant entre enseignement et expérience pratique, représente une condition d'E.P. que la crise économique ne va pas aider à réaliser. Beaucoup de travail reste à faire. C'est à un repère plus fin de ce travail que s'emploient les autres parutions, à partir d'analyses de pratiques précises et de points de vue différents.

2. *La situation française*

La situation française pour être récente (1971-1973), n'en est pas moins complexe. Cette situation est structurée par la loi néo-libérale de 1971 instituant le marché de la formation continue et par des "circulaires" de 72-73 déterminant les conditions de participation universitaire. Cette institutionnalisation vise explicitement à provoquer la mutation du système universitaire. Mais vers quoi?

- vers une amélioration interne des universités "par l'introduction principalement d'une *pédagogie négociée*, devant entraîner un renouvellement radical de leurs habitudes, de leurs structures, de leurs méthodes ou du contenu de certains de leurs enseignements"? (lettre circulaire du 26-04-1972).
- vers une ouverture démocratique aux groupes sociaux "non solvables" ne bénéficiant pas dans le passé des ressources universitaires?
- ou vers une économie de marché où les universités passeraient du statut de service public, protégé, gratuit, financé par l'état à celui d'agents économiques soumis à la dure loi de la concurrence et du financement?

Les législateurs de cette époque n'ont pas opté. Ils se sont contentés d'instituer formellement des structures contractuelles devant permettre en principe selon une optique néolibérale, un libre jeu des rapports sociaux entre patronat-syndicat et universitaire.

Daniel Chevrolet, du Service d'éducation permanente de l'université de Rennes, s'essaie à dégager "le signe et le sens" de cette situation: "*L'université et la formation continue. Signe et sens d'une situation de l'éducation*". Il mène une analyse sociologique du dispositif mis en place. Après avoir fait l'historique des "difficultés en série" (première partie), il s'interroge plus particulièrement sur la négociation éducative, comme outil de la formation (deuxième partie) et sur la redéfinition de l'université comme service public (troisième partie). Jean-Claude Castagnos et Claude Etchevin, de l'Institut d'Administration des Entreprises de Grenoble, veulent apporter le regard froid d'une analyse économique et gestionnaire. Pas facile sur une situation chaude! Leur éclairage nouveau ne tranche cependant pas

la question: *La formation continue dans l'université. Peut-être ... mais pour quoi faire?* Jean-Marie Labelle, du service de formation continue de l'Université Louis Pasteur de Strasbourg, explore lui, dans *Université et éducation des adultes*, les rôles émergents d'un service universitaire d'E.P. à partir de ce qu'en disent ses responsables. Un tel service "n'est réductible à aucun autre type de services universitaires" (p. 204) et il analyse très finement ses rôles institutionnels, opérationnels et fonctionnels.

3. *La situation québécoise*

Au Québec, les rapports entre les universités et l'E.P. ne sont pas encore encadrés par une loi. Ces rapports se cherchent. *L'Université pour qui?* s'interroge Michel Pichette du Service d'éducation permanente de l'Université de Québec à Montréal. Son sous-titre *Démocratisation du savoir et promotion collective*, annonce la réponse. Promotion collective et promotion culturelle sont deux nouvelles formes d'intervention éducative à développer pour que les classes populaires puissent mobiliser elles aussi les ressources universitaires. Et les conditions de ce développement sont longuement analysées et justifiées comme moyens de réaliser cette troisième fonction de "services à la collectivité" que travaillent actuellement les universités québécoises. Sont nécessaires entre autres, des mécanismes de jonction, à la frontière de ces deux mondes étrangers et opposés que sont les universités et les classes populaires. G. Pineau, de la Faculté de l'éducation permanente de l'Université de Montréal, analyse dans *Les combats aux frontières des organisations* l'émergence et le développement de tels mécanismes, en essayant de ressortir le modèle organisationnel théorique que génèrent progressivement ces pratiques.

Ces écrits universitaires sur les rapports entre universités et E.P. servent avant tout les universités avons-nous dit au départ. Mais ils ne desservent pas automatiquement l'E.P. Autant qu'à légitimer ces rapports, ils commencent aussi à les spécifier: Enseignement Supérieur, Après Expérience de Travail (ESAE), Alternance, congé-éducation, pédagogie contractuelle, négociation éducative, marché de la formation, nouvelles médiations pédagogiques de nouveaux services universitaires, promotion collective, promotion culturelle, service à la collectivité, transactions à la frontière des organisations, sont autant de concepts produits de ces rapports qui rendront de plus en plus primaire et anachronique le concept d'intégration pure et simple de l'E.P. aux structures universitaires, concept auquel se réduit encore souvent pour de nombreux universitaires, le rapport entre universités et E.P.

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GILLETTE, A.L. *Beyond the Non-Formal Fashion: Towards Educational Revolution in Tanzania.* Amherst, U.S.A.: Center for International Education, University of Massachusetts, 1977, pp. 321.

This is an impressive book which deals in great detail with the relationship between formal and non-formal education in Tanzania and in so doing gives a clear picture of present educational trends in that country. Beginning with a chapter about the historical background to present-day Tanzanian education, the book then discusses in seven chapters the following:
the goals of education (are there any?, their sources, their orientation); the amount of education (how many educated?, who?, for how long and in what sequence?); the kind of education (subjects studied; teaching methods; language); resources for education (human and material resources; plant); the financing of education (national expenditure and financial resources); the organization of education (planning and evaluation; distribution of responsibility; relationship between the authorities concerned); and foreign influences on education (sources of foreign aid, its recipients; its influence on concepts and policy). Each of the seven chapters has the same format of analysis and discussion followed by summary and conclusions. There is then a final chapter containing tentative conclusions based on all that preceded it. There are also five useful tables placed in relevant parts of the book. The bibliography is an extensive one and is constantly referred to throughout.

One of the great merits of the book is that it comes to grips with a thorny problem, the interaction of formal and non-formal education, in a country which has attracted much attention in recent years because of its innovative educational policy. Most studies tend to deal with the formal and non-formal either singly and separately or as stark alternatives to each other, ignoring overlaps, cross influences and the possibility of coexistence. Another merit is its realism. Too many studies of Tanzanian education tend to be starry-eyed about its development, reading into ministerial pronouncements and official statements far more than the actual situation warrants. Indeed some of these studies go much further in their enthusiasm and optimism than the Tanzanian authorities themselves. Not so this book which examines actual implementation as closely as it does policy statements of interest. As the author wryly puts it in Chapter II, there is a difference between the recipe and the pudding.

This reaction is matched by a cautious appraisal of the evidence examined. There are no sweeping statements and no hasty, ill-founded conclusions. Indeed the evidence, as presented in the format already mentioned, leaves the reader free to draw his own conclusions about many

of the issues. This does not mean, however, that the author is uncommitted. His own conclusions are as firm as they are well-argued. They are that formal and non-formal education continue to exist side by side in Tanzania; that there are important consequences and overlaps between the two, and that particularly at the primary level the formal system has evolved more in the direction of the non-formal than the reverse. A more important conclusion following these three is that there are nevertheless marked contradictions between the two coexistent systems, the non-formal being more closely identified with Tanzania's peculiar brand of socialism (called in Swahili "ujamaa" which means "feeling of familyhood"), whereas the formal is more closely identified with the modern, urbanised sector of the economy. As the latter is still regarded especially by parents as the one bringing most rewards, tensions and misunderstandings have inevitably arisen. The author's findings in this respect have been confirmed since he wrote his book, as witness the recent rapid spread of private secondary schools in certain *rural* areas – a strong pointer to the rejection by their inhabitants of the policy of terminal primary education for almost everybody.

The book has some flaws. There is a tendency to regard everything done in education before the New Dawn of Independence as misguided and futile. This leads to some errors in fact. For example, (page 50), the "political domination, economic exploitation and corresponding cultural aggression" of the two colonial powers, Germany and Britain, did not last for a century but at the most for barely 80 years. There was no switch from English to Swahili as the medium of instruction in primary schools (page 45). Ever since German times the medium had been Swahili with English taught, if at all, as a subject from the third year on. The lack of printed materials in schools prior to 1967 was not a prominent feature. The schools were better equipped then than they are now. Another flaw is that there is no index. Yet another is that the book is so badly bound that it comes apart as you read it.

Some smaller errors are: – the Swahili for good manners is "adabu", not "ababu"; "Heshima" is a noun, not a verb (page 29); the place name is "Kwamsisi", not "Kwamsis" (page 256). Almost without exception, words in Swahili and other Bantu languages end with a vowel. The unusual final words of the book "is still aborning" must mystify many.

Yet all these flaws and errors do not detract from the book's usefulness as a careful and convincing treatise on one of the most interesting educational innovations of our epoch.

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BYRNE, E.M. *WOMEN – Women and Education.* London : Tavistock Publications, 1978, pp. 285.

Erziehung und Ausbildung gehören zu den wichtigsten Faktoren, die über den Lebensweg des Erwachsenen entscheiden. Die Forderung nach gleichen Lebenschancen für Frauen ist daher seit langem mit der Forderung nach gleichen Ausbildungsmöglichkeiten verknüpft. Der Beitrag von E.M. Byrne zu diesem Thema ist ein Appell zur Beseitigung der Schwierigkeiten, die Mädchen und Frauen auf dem Weg einer qualifizierten Ausbildung immer noch zu überwinden haben. Auf der Grundlage einer mehr als 20-jährigen Erfahrung in der Organisation des englischen Erziehungswesens stellt Byrne die Situation der Mädchen bzw. Frauen im gesamten englischen Erziehungs- und Ausbildungsbereich vom Kindergarten bis zur Universität dar und legt den Finger auf die zuerst ganz subtile, mit zunehmendem Alter immer offensichtlicher werdende Benachteiligung der Mädchen. Bei derart ungleichen Möglichkeiten müssen zwangsläufig Geschlechtsunterschiede entstehen, die nur allzu leicht als naturgegeben betrachtet werden und als Vorwand dazu dienen, es bei dem ungleichen Ausbildungsangebot zu belassen. Byrne setzt dem mit Leidenschaft die Auffassung gegenüber, dass es am Ausgangspunkt zwischen Mädchen und Jungen keine relevanten Unterschiede gibt, die ein unterschiedliches Ausbildungsangebot rechtfertigen könnten, und fordert nicht nur das Angebot einer *gleichwertigen*, sondern der *gleichen* Ausbildung für beide Geschlechter. Sowohl Mädchen als auch Jungen sollten für eine Doppelrolle in der Familie und im Beruf erzogen werden.

Viele Aussagen, zu denen Byrne kommt, sind nicht neu. Da sie aber bisher so wenig ins allgemeine Bewusstsein eingedrungen sind und somit auch noch nicht zu den notwendigen Konsequenzen führen konnten, ist es nicht überflüssig, sie einmal in einem umfassenden Rahmen darzustellen.

Byrne zieht für ihre Aussagen einige Statistiken heran. Trotzdem muss vieles vorerst noch Hypothese bleiben und ist auch so gemeint. Hier ergeben sich zahlreiche Ansatzpunkte für weitere Forschungen, wie sie z.B. von A. Kelly (vgl. *Girls and Science,* 1978) durchgeführt worden sind.

Die Ausführungen von Byrne beziehen sich auf englische Verhältnisse, treffen aber im Grundsätzlichen zweifellos auch auf die Verhältnisse in anderen westlichen Ländern zu. So richtet sich das Buch nicht nur an englische Leser, sondern auch an diejenigen in westlichen Ländern, die in der Bildungsplanung, im Unterricht und als Eltern mit Erziehung und Ausbildung befasst sind. Byrne hätte es ihren Lesern leichter gemacht, wenn sie ihre Ausführungen etwas gerafft hätte.

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BELSON, W.A. *Television Violence and the Adolescent Boy.*
Teakfield : Saxon House, 1978, pp. 529.

KUNCZIK, M. *Brutalität aus zweiter Hand – Wie gefährlich sind Gewaltdarstellungen im Fernsehen ?*
Köln : Bohlau Verlag, 1978, pp. 107.

MANDER, J. *Four Arguments for the Elimination of Television.*
New York : Morrow Quill, 1978, pp. 361.

The studies prior to Belson on the influence of violence in television programmes had left some doubts. In particular it seemed as though attitudes did not change as a result of regular viewing. Tests comprising laboratory experiments which revealed changes of behaviour were open to the objection that the situation was too artificial to provide conclusive evidence about what happens in real life. The evidence was, however, clear enough for the report of the U.S. Surgeon General to sum up with a strong statement in favour of reducing the amount of violence, but little had been done.

Accordingly Dr. Belson was given a grant of 290,000 dollars to attempt to measure real life changes due to viewing television. As the use of television spreads more and more widely throughout the world and on average children in such countries as Great Britain spend more time in front of the screen than in front of the blackboard, the issue is of vital importance. Moreover in England and Wales, to take one example, crimes with violence have increased tenfold in the twenty years since television was introduced without any certain explanation having been found.

In these circumstances Dr. Belson and his colleagues undertook their work. Perhaps in dealing with contentious issues where the vested interest of commercial firms is great, research workers should declare their attitudes as they take up their task but this has never been the practice and Dr. Belson himself is excessively modest in the conclusions he draws and enormously painstaking in going into every detail, as the length of the research report indicates. There are seven and a half pages of lists of references used in the drawing up of hypotheses to test.

The first task was to develop measuring instruments such as for the degree to which boys had been exposed to television violence and for the extent to which they were involved in violent behaviour. The many kinds of television violence and violent behaviour were treated both separately and together.

The sample consisted of 1565 London boys and there is no hard evidence that the results would be corroborated even in other large cities with a similar culture and television system. In the anonymous interview each boy was asked regarding a number of acts of violence to indicate by a card-sorting process whether in the previous six months he had behaved in such and such a way. The training of interviewers, the recording of interviews and the checking of results were so elaborate that great confidence can be placed in the results. By an ingenious and novel use of the reverse hypothesis the degree of certainty that the viewing caused the behaviour and not vice versa is indicated. He concludes to the hypothesis that a high exposure to television violence increases the degree to which boys engage in serious violence, the evidence gave a large degree of support. On the other hand no meaningful support is given to the hypothesis that television violence "hardens" attitudes. This difference between behaviour and attitudes will be noted by many research workers concerned with social science. The study of teaching at the unconscious level is in its infancy.

This enormously important study will continue to be discussed for many years to come both by statisticians and by those social scientists whose work touches either the media or violence. It is of profound significance for educationalists. For the general reader who fights shy of a book with a list or table on every other page there is a convenient twenty-four page summary.

Kunczik in contrast with the cautious statements of Belson has written a review of the literature on television violence with such an unseemly impatience that he would have done well to have established his credentials in the first place. He claims that there is no evidence of a reliable sort to suggest that there is a causal connection between the viewing of violence on television and violent behaviour. He dismisses the early researchers for a variety of faults in their research design, overlooks the gradual improvement in methods, claims that some found such a small connection that it was in fact evidence that the programmes are harmless. At no point does he consider the reasons why advertisers spend their millions on television advertisements.

He is particularly interesting when he comes to Dr. Belson. He had unfortunately read only a preliminary paper and not the full report. He focussed his attention on the finding that attitudes elicited by oral questioning appeared to be different from behaviour and suggested that this is out of line with modern attitude theory. Belson propounded a kind of "disinhibition" which occurs in the unconscious. Kunczik does not accept Belson's use of the reverse hypothesis.

In drawing his paper to an end he associates himself with those who

believe in the cathartic value of television violence by pointing to the exclusion of violence from films during the Nazi period, the "most brutal period in German history".

The book will be of interest to all research workers wishing to know what kinds of faults are likely to be found with their methods; it is indeed a book of fault finding; at the end of this exercise in the application of scientific method one may wonder that the author sees nothing but black. As a consequence, the picture he draws is hard to believe.

Mander's book is different from the other two in that it deals not with television violence but with television. The author opens with an autobiographical introduction in which he reports his fifteen years as a public relations and advertising executive. This gave him a deep insight into the relationships between product, medium and viewer which not only inspired the writing of the book but afforded the knowledge to do so. It is a rare case of reporting back from enemy territory at the cost of a handsome salary.

It is not until the very end of the lengthy introduction that the four arguments are set out and in a sense it is as well. No one should decide whether or not to read the book until he has read the introduction; the title may suggest a crank but the introduction is acceptable to the open-minded.

The first argument is about second-hand experience and the artificial environment which leads to disorientation and alienation. The second is a reminder that this is a book about U.S.A. for U.S.A. readers and deals with the control of television by large companies through the funds they spend on advertising. Fortunately this problem is eased in many other countries, though the danger of its leading to a monopoly of economic or political power exists everywhere.

The third argument is that television has harmful physical and psychological effects beyond those set out in the first argument. Many readers will doubt the evidence that the light coming from the set may damage cells in the human body but Mander himself is asking that further research should be done. One of the difficulties of television is that its effects are economic, political, social, biological and psychological and no writer can be expert in these many fields. In this section of the book he asks whether the term hypnosis can rightly be applied to the effect on many viewers.

The final argument covers more familiar points, that the cameras by their very nature make more of movement such as violence and less of ordinary living. Previously he had pointed out that the number of technical events, such as change of camera position, is highest in advertisements and lowest in the cheaper programmes so that he set his children to count them to help

learn how they were being induced to keep viewing by the fidgeting of a cameraman desperately attempting to avoid boredom in his viewers.

This book is a worthy successor to *Silent Spring*, the pollution of the mind ranks with the pollution of the earth. Anyone feeling taxes are heavy or income light is well advised to buy this book. He will want to protect himself and his children by selling his television set.

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RITTER, JEAN und RITTER, PAUL. *Freie Kindererziehung in der Familie.* Reinbek bei Hamburg: Rowohlt-Verlag, 1972, 317 S.

In vier Teilen beschreiben Jean und Paul Ritter und ihre Kinder jeweils aus eigener Sicht das Rittersche Familienexperiment.

Jean und Paul Ritter haben das Experiment einer freien Kindererziehung gewagt. Ausgehend von den Theorien Wilhelm Reichs und A.S. Neills war ihr oberstes Erziehungsprinzip die Selbstbestimmung. Für die Eltern Ritter folgte daraus, dass Kinder nach eigenen Kriterien Entscheidungen treffen sollen und sich danach entwickeln können. Sie sollten lernen, selbständig ihre Bedürfnisse zu steuern und mit denen ihrer "Umgebung zu harmonisieren".

Ziel ist es, die Kinder zu befähigen, Verständnis für andere aufzubringen, Freude am Spiel, am Lernen und an natürlichen Verrichtungen zu haben und neuen Situationen gewachsen zu sein. Im Rahmen der Selbstbestimmung sollen dem Einzelnen grösstmögliche Freiheiten zugestanden werden, solange er dabei noch die Rechte anderer berücksichtigt. Alle Ritter-Kinder hatten von Anfang an die Freiheit, z.B. den Zeitpunkt und die Menge ihrer Nahrungsaufnahme selbst zu bestimmen. Sie durften sich selbst regulieren in Bezug auf Schlafen, Spielen, Auswahl von Spielkameraden und Spielmitteln. Einschränkungen erfuhren sie unter anderem darin, dass sie sich mit den Geschwistern über die Benutzung eines bestimmten Spielzeugs einigen mussten, dass sie nicht mit den Büchern der Eltern spielen durften, dass ihnen die Eltern in den Abendstunden nur in Ausnahmefällen zur Verfügung stehen wollten. Für die Eltern war es immer wichtig, jedem Kind das Gefühl der Sicherheit zu vermitteln, seine emotionalen Bedürfnisse und seinen Wunsch nach Liebe zu befriedigen, mit dem Kind zusammenzuarbeiten, ihm zu helfen und es anzuerkennen.

Als die Ritter-Kinder in die Schule kamen, zeigte es sich, dass sie sich

bezüglich Intelligenz und Eignung durchaus mit anderen Kindern messen konnten und dass sie auf ihre Weise mit der Schuldisziplin und den Regeln der Schulgemeinschaft fertig wurden.

Heute vertritt die älteste Tochter, Leonora Ritter, eindeutig die autonome Erziehung und Selbstbestimmung, die sie für die brauchbarste, gesündeste und effektivste Erziehungsmethode hält. Ihrer Meinung nach wird hier das Kind dazu befähigt, seine Umgebung zu erkennen, zu analysieren und sich selbst dazu in Bezug zu setzen.

Ihre Schwester Penny empfindet es als positiv, daß in ihrer Familie statt Konkurrenz unter den einzelnen Mitgliedern immer Zusammenarbeit im Vordergrund stand, und dass die Familie sich immer zusammenschloss, wenn es galt Probleme der Einzelnen im öffentlichen oder privaten Bereich zu lösen.

Das Buch *Freie Kindererziehung in der Familie* kann eine Hilfestellung für Eltern und Erzieher sein, die Kindern mehr Rechte einräumen wollen und sie befähigen wollen, mit anderen Menschen schöpferisch zusammenzuleben. Es enthält wertvolle Anregungen, wie Kinder frei und kindgemäss aufwachsen können. Es ermutigt Erziehende, Selbstbestimmung als Erziehungsprinzip zu verwirklichen und enthält viele praktische Beispiele für Erziehung zur Autonomie. Allerdings betonen Jean und Paul Ritter auch, dass diese Erziehungsmethode in der bestehenden Gesellschaft nur begrenzt durchzuführen ist. Sie stellt eine Herausforderung an die Eltern dar, und nicht jeder hat die Fähigkeit, sie sinnvoll anzuwenden, denn "ein autonomes Kind lässt sich nicht so einfach durch finstere Blicke einschüchtern".

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NIKITIN, BORIS und NIKITIN, LENA. *Die Nikitin-Kinder.* Köln: Kiepenheuer & Witsch, 1978, 291 S.

In vier Beiträgen dokumentieren Boris (62, Ingenieur, wissenschaftlicher Mitarbeiter an der Moskauer Akademie der pädagogischen Wissenschaften) und Lena Nikitin (48, Lehrerin, Leiterin der Bibliothek in Bolschewo bei Moskau) ihr erstaunliches, vor nahezu zwei Jahrzehnten in der eigenen neunköpfigen Familie begonnenes pädagogisches Experiment.

Biographische Beispiele der Frühentwicklung hervorragender Menschen (Curie, Wiener, Gogol), die Arbeiten Maria Montessoris und

L.S. Wygotzkijs, reformpädagogische Auffassungen insbesondere des Dichters Leo Tolstoi, Vergleiche mit Erziehungsmethoden anderer Völker, jahrelange Erfahrungen aus ihrer Arbeit in der Schule und vor allem sorgfältige Beobachtungen der Entwicklung ihrer eigenen Kinder im Zusammenhang mit pädagogischen Maßnahmen veranlassen Boris und Lena Nikitin zur schrittweisen Formulierung und Anwendung prinzipieller Aussagen in Fragen der Gesundheitserziehung, der Sozialerziehung und bezüglich der Entwicklungsmöglichkeiten geistiger (insbesondere schöpferischer) Fähigkeiten im Säuglings- und Kleinkindalter.

Folgende Grundsätze gilt es nach Meinung der Autoren in der Erziehung zu beachten: Die Bereitstellung einer reichhaltigen Umgebung, die Gewährung grösstmöglicher Freiheit und Selbständigkeit sowie die ständige elterliche Anteilnahme an allen Aktivitäten der Kinder.

Alle Fähigkeiten können nur bei rechtzeitigem Beginn der Förderung und bei besten Entwicklungsbedingungen optimal entwickelt werden. Frühzeitige Abhärtung und die Entwicklung motorischer Fähigkeiten sind die wichtigsten Ziele der Gesundheitserziehung. Im Bereich der Sozialerziehung formulieren Boris und Lena Nikitin drei wesentliche Forderungen. Danach können Kinder zu sozialverantwortlichen Menschen nur dann erzogen werden, wenn Erwachsene hierbei selbst ein positives Beispiel geben, wenn Kinder in allen ihren Versuchen, anderen zu helfen, beachtet werden und wenn Eltern gemeinsam mit ihren Kindern "Fürsorge" praktizieren.

Ausgangspunkt und zentrales Anliegen vieler Überlegungen ist die gemeinsame Arbeit der Familienmitglieder. Von frühester Kindheit an wurde den Kindern die Möglichkeit gegeben, sich mit allen Gegenständen des Haushalts vertraut zu machen. Grundsätzlich taten die Nikitins alles gemeinsam: Wenn die Eltern Haushalts- oder Gartenarbeit verrichteten, waren auch die Kinder dabei, und zwar mit eigens für sie angefertigten Werkzeugen. Im Zusammenhang mit den Dingen ihrer Umwelt und in spielerischem Umgang lernten die Kinder ferner Zahlen und Buchstaben kennen. Ein eigener Raum sicherte den Kindern zahlreiche Bewegungsmöglichkeiten an individuell eingerichteten Turngeräten.

Die Ergebnisse dieses pädagogischen Versuches beeindrucken: Schon im Alter zwischen 12 und 24 Monaten lernten die Kinder erste Pflichten und Aufgaben aus dem Haushalt zu übernehmen (z.B. Schlafstätte aufräumen oder Tisch decken).

Mit zwei Jahren konnten sie sich bereits nahezu selbständig an- bzw. ausziehen. Die Kinder waren kaum krank und bei körperlichen Anforderungen sehr geschickt und ausdauernd. Alle Kinder konnten im Alter von

drei bis vier Jahren lesen und wie Erstklässler rechnen. Im Alter von vier bis fünf Jahren verstanden sie Landkarten, Pläne, Zeichnungen. Zwei Jahre vor der Einschulung kannten die Kinder Zahlen bis zu einer Million und rechneten mit einfachen Brüchen, kannten Längen-, Gewichts- und Zeitmasse. Alle Kinder verkürzten die Dauer schulischen Lernens um einige Jahre.

Zufall oder Ergebnisse einer optimalen Erziehungsstrategie? Inzwischen wurden die Methoden der Nikitins in einigen Familien und Kindergärten in der Sowjetunion erfolgreich angewendet. Diese Fallstudien gilt es, möglichst häufig und unter verschiedenen Bedingungen zu replizieren. Auf dieser Grundlage könnte ein Beitrag zur Neuformulierung einiger theoretischer Aussagen im Bereich frühkindlicher Erziehung geleistet werden.

Das Buch *Die Nikitin-Kinder* aktualisiert die Erbanlage-Umwelt-Problematik im Sinne einer Belebung des pädagogischen Optimismus. Nicht Jensens Frage "How much can we boost IQ and scholastic achievement?" und die von ihm gegebene Antwort weisen den richtigen Weg für eine Pädagogik im Interesse der Kinder, sondern die gerade im Internationalen Jahr des Kindes noch stärker als bisher zu vertretende Forderung, allen Kindern vom Säuglingsalter an optimale Entwicklungsbedingungen für die uneingeschränkte Herausbildung ihrer Fähigkeiten zu gewähren.

Marianna Butenschön kennzeichnet als Herausgeberin die Nikitinschen Schriften zu Recht als wahre Fundgrube für pädagogische Anregungen. Anregungen bieten diese Schriften aber nicht nur Eltern, sondern vor allem auch Erziehern, die in öffentlichen Institutionen arbeiten. Denn in unserer Gesellschaft sollten die Bedingungen und Forderungen des Nikitinschen Erziehungskonzeptes noch am ehesten in Kinderkrippen, Kindergärten und Schulen verwirklicht werden können.

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DUNSTAN, J. *Paths to Excellence and the Soviet School.* Windsor, Berks.: NFER Publishing Company, 1978, pp. 302.

Unter den Arbeiten zur Geschichte und zum gegenwärtigen Zustand des sowjetischen Schulwesens fehlte bisher eine gründliche und umfassende

Untersuchung jener Schulformen, die man zusammenfassend als "Begabtenschulen" bezeichnen könnte. Zwar haben Arbeiten von Glowka, Mitter und Schiff im deutschsprachigen Schrifttum ebenso wie vorher De Witt und Pennar im amerikanischen dem Problem der Begabtenförderung im Einheitsschulsystem der Sowjetunion Aufmerksamkeit geschenkt, aber erst John Dunstan (Birmingham) hat diese Frage nach allen Seiten systematisch behandelt. Wenn man bedenkt, daß auch die Studie von Kienitz über "Einheitlichkeit und Differenzierung im Bildungswesen" (Berlin-DDR, 1971) das Problem einer besonderen schulischen Förderung spezieller Begabungen nur summarisch behandelt und in der UdSSR selbst eine ähnliche Arbeit überhaupt nicht existiert, wird die besondere Leistung des Verfassers ohne weiteres erkennbar.

Nach einer knappen historischen Skizze mit einem Überblick über das allgemeinbildende Schulwesen der UdSSR Mitte der siebziger Jahre behandelt Dunstan in einem jeweils eigenen Kapitel die Kunstschulen, die Sportschulen, die Schulen mit erweitertem Fremdsprachenunterricht, die mathematisch-physikalischen Internatsschulen, sowie daran anschliessend die anderen Formen der Begabtenförderung: die Schulen mit "besonderem Profil", den fakultativen Unterricht in der Normalschule, Versuche mit einer Gruppendifferenzierung, die ausserunterrichtlichen Aktivitäten verschiedener Art sowie die Wettbewerbs-Olympiaden. In einer abgewogenen, wenn auch knappen Schlussbetrachtung vermeidet der Autor voreilige Antworten auf die Frage, ob die genannten Einrichtungen einer "Elitenförderung" im soziologischen Sinne dienen – eine manchmal im Westen zu vordergründig gestellte Frage. Das Datenmaterial gerade zu diesem Punkt ist äusserst dürftig; hier stiessen auch die minuziösen Recherchen des Verfassers an ihre Grenzen.

Es verdient Bewunderung, mit welcher Sorgfalt Dunstan aus den verschiedenen Quellen – Fachzeitschriften und die Tagespresse sind die wichtigsten – sein Material zusammengetragen hat. Hier findet man zum ersten Mal genaue Angaben über die Anzahl der verschiedenen Spezialschulen für Begabte oder mindestens plausible Schätzungen dort, wo solche Zahlen kaum zu haben sind. Gerade dort, wo das Terrain unsicher ist, vermeidet der Autor kühne Spekulationen. Das Buch stellt eine Fundgrube für sonst schwer zugängliche Details dar, z.B. über die innere Struktur der Fremdsprachenschulen und der besonderen Mathematikschulen. Auf diese Weise gewinnt der interessierte Leser differenzierte Einblicke in die realen Probleme des sowjetischen Schulwesens, mehr, als dies flächige und notwendigerweise allgemeine Überblicke des Gesamtsystems leisten können.

Vielleicht sollte zum Schluss erwähnt werden, dass das Kapitel über die Internatsschulen für Mathematik und Physik nicht eine Darstellung der sowjetischen Internatsschulen als solche gibt, die eben nicht in die Kategorie der Begabtenschulen fallen. Über Entwicklung und Probleme der Internatsschulen als Typus kollektiver Erziehung und der Sozialfürsorge hat Dunstan in einem deutsch erschienenen Beitrag in dem Buch *Erziehungs- und Sozialisationsprobleme in der Sowjetunion, der DDR und Polen* (hrsg. von Oskar Answeiler, Hannover: Schroedel, 1978) berichtet, den man als Ergänzung heranziehen sollte. Die in Großbritannien nur von wenigen Personen und an wenigen Zentren – eher unkoordiniert – betriebenen Forschungen zum Bildungs- und Erziehungswesen der UdSSR werden durch Dunstan's Buch, so hoffen wir, weiteren Auftrieb erhalten.

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KARABEL, JEROME and HALSEY, A.H. (eds.). *Power and Ideology in Education.* New York: Oxford University Press, 1977, pp. 670.

This mammoth compendium is the result of cooperative efforts by two editors "both a generation and an ocean apart". Their bias is clearly stated in the preface and it was the element which unified the work of two eminent sociologists, e.g. "a shared political vision of a classless educational system". The book is unusual in that it is critical of the contributors, including self-criticism.

The lengthy introduction (85 pages and 97 footnotes) successively presents the theories of functionalism, human capital, methodological empiricism, conflict and interpretive sociology, and dissects each thoughtfully and carefully. There are six sections, each preceded by an introduction to the contributors which places them in the context of sociological research history. The titles of the six sections are: I. Education and Social Structure, II. Education and Social Selection, III. Education, "Human Capital" and the Labor Market; IV. The Politics of Education, V. Cultural Reproduction and the Transmission of Knowledge, and VI. Social Transformation and Educational Change. The titles of the sections reflect the unbiased selection of articles dealing with the overall theme of ideology and power in education.

This is an important book for any lecturer or teacher of sociology of

education and can serve equally well as a primer for other educationists. The introductions are extremely well-written. The editors give as criteria for selection of articles their own personal interests and that the articles should be recent, e.g. '60's or '70's. One can quibble about any selection but here one misses articles by Ralph Turner and Talcott Parsons, although both are praised in the introductions.

Although not intended to be a piece of comparative sociology, many articles are of interest to comparativists – educational and otherwise. Not only Great Britain and the United States are mentioned, but also China, Cuba, France, Ghana, Peru, Germany, Italy and the Soviet Union. Unfortunately there is no subject index, which is a major drawback to using the book effectively. However, as a source of sources the book is highly useful in finding material on educational institutions since the educational boom of the 1950's.

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CENTRAL COUNCIL OF EDUCATION, MINISTRY OF EDUCATION, DENMARK. *U 90 – Danish Educational Planning and Policy in a Social Context at the End of the 20th Century.* Copenhagen: Schultz Forlag, 1978, pp. 365.

This report was produced after nearly three years work by the Danish Central Council of Education, a recently established government advisory body consisting of representatives of the various educational sectors and interest organizations, the major labour market organizations, and experts appointed directly by the Ministry of Education. This Council was in 1975 asked to prepare a long-term plan for the development of the entire Danish system of education up to 1990. Hence "U 90" for *Uddannelse* (education) up to 1990. This English version of the original report has also served as a submission for review by an OECD panel of experts.

Also in Denmark, recent decades have witnessed great quantitative expansion in education; and there have been a number of piecemeal structural changes: e.g., extending the school leaving age and comprehensive schooling to age 16, the growth of school-based vocational education, the development of "higher preparatory courses" as an alternative to academic upper secondary schools in preparing for a widening range of

higher education courses, the setting up of experimental "university centres" alongside the established universities, and a law on the governance of higher education which was rapidly passed in the wake of the Danish "events of 1968" which stripped full professors of much of their decision-making power in favour of junior staff and students. But these changes have in the main not been prepared by in-depth commission reports supported by background research.

Therefore, the U 90 report signifies a shift in the Danish procedure for educational reform work, bringing it closer to the well-known Swedish paradigm of Social Democratic school reforms based on exhaustive commission work "supported" by research, involving representatives of corporate interest groups "outside" as well as "inside" education, and defining education as an integral part of overall social policy – as too important to be left to the educators alone.

Compared to its Scandinavian neighbours, Denmark has been rather slow to depart from the pre-war structure of education. The Social Democrats – those Nordic steam rollers of elitist school structures, have been weaker in Denmark than in Sweden and Norway; and traditions of voluntarism, parental involvement (both traceable back to Grundtvig), and institutional autonomy have been stronger in Denmark. The reform strategy manifested by U 90 and its recommendations suggest that Denmark is moving more closely to its northern neighbours. Indeed, the global mandate given to the Central Council of Education suggests a major catching-up effort by the ruling Social Democratic Party whose educational ideas are clearly dominant in the U 90 report. It is therefore rather surprising that the report makes no attempt to discuss and evaluate school reforms in the neighbouring countries.

There is a strong emphasis on egalitarian aims throughout. Much space is devoted to the socio-economic context of schooling, to a description of the present system and its antecedents, and to characteristics of the teaching staff. The ethos of Progressive education is affirmed without any caveats or rear-guard defences by those who believe in the value of early induction to distinct forms of knowledge or who might worry about the practical compatibility between a student-centred pedagogy and the skill claims of an economy in need of revival. No trace is found of the "back to basics" call of which there have also been murmurs in Danish public debate.

Yet, within this broad Progressive consensus, the report is replete with minority statements, both from the "Right" and from the "Left", showing that planning by Royal Commission is not always successful as a consensus mobilizing strategy. The main recommendations are not radical by Scandinavian standards:

1. It is proposed that pre-school provisions are to be better coordinated and greatly expanded, and that by the late 1980's compulsory schooling should begin at age 6 rather than the present age 7.
2. U 90 gives its approval to the present trend in primary and lower secondary schools towards "integrated studies", "the project method", and efforts to breach barriers between school and "community". There is continued stress on integrating disabled pupils into "normal" classrooms. It is surprising in Grundtvig's Denmark where the Social Democrats only a few years ago proposed to banish exams and marking from compulsory schooling, that exams and marking are left largely untouched, but "they should be designed and used in such a way that *not too much importance is attached to actual achievements* (my italics), and in such a way that they will reflect to a higher extent the daily process of teaching". Also surprising, in spite of the strong egalitarian concerns professed in the report and the model provided by neighbouring Norway, the last rudiments of structural elitism in the curriculum are left untouched: there is no proposal to abolish subject options at different levels of difficulty in key academic subjects in the comprehensive lower secondary stage (ages 13 to 16). On the other hand, it is affirmed that in principle options chosen in the lower secondary stage should not foreclose opportunities to enter certain courses at age 16+.
3. The Scandinavian stress on a very large "common curriculum" in the lower secondary stage implies that vocational training in earnest can only begin in the post-compulsory stage. Those who leave school at the earliest opportunity (16+) – a group with decidedly low interest in recurrent education offerings – are then left with few marketable skills, especially under present economic conditions. There has in Denmark in recent years been considerable concern about this "residual group" as it is known there. U 90 defines the "residual group" as a major problem but shies away from recommending an extension of compulsory schooling as the remedy. Rather, hope is pinned on making offerings more attractive and on quantitative expansion of provision so that nearly all 16 to 19-year-olds will be in school by the end of the 1980's. There is stress on broadly based vocational preparation and that general education should not be conceptualized as a mere prelude to further study. But much is left unspecified about the future development of this stage of schooling in spite of the fact that reform of upper secondary schooling has for some years been the next item on the Danish agenda for school reform. U 90 gives firm approval to Denmark's recent shift from apprenticeship-based to school-based vocational education; and there is emphasis on the need to see all post-compulsory education within a common framework to facilitate planning and ease transfers

between different courses, but there is no clear-cut recommendation in favour of replacing different types of school with upper secondary comprehensives along Swedish and Norwegian lines.

4. No radical reorganization of higher education is proposed, but there is stress, as in so many countries, on developing short-cycle courses of an applied orientation. Closer "coordination" is proposed for the different types of teacher education – but no clear-cut structural integration, and it is argued that there is a need to integrate the study and practice of pedagogy more closely with the study of subject matter to be taught. As to adult education, U 90 recommends that more resources be devoted to recurrent education provisions for the unemployed and for early school leavers, using an active "out-reaching" policy to enrol those who are hardest to reach, supported by day-release entitlement and some compensation for wages foregone.

The proportion of GNP spent on education is already high in Denmark: 7 per cent. The hope is that economic recovery – of which there are only too few signs at the moment – will by 1990 enable Denmark to have realized the U 90 recommendations without raising this proportion above 8 per cent.

U 90 has been published and widely circulated as a discussion document. It remains to be seen what the political decisions will be. Much of the U 90 recommendations appear to be at the level of aims and priorities rather than concrete prescriptions – and the specific recommendations do not appear especially radical in the Scandinavian context. Apart from the insights U 90 gives into what may become Danish policy, it provides a gold-mine of information for the international community of comparative educationists who have been rather short on material in English on recent Danish developments.

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THOMAS, FREDERICK J., and KONDO, ALLAN S. *Towards Scientific Literacy.* Teheran: The International Institute for Adult Literary Methods, 1978, pp. 96.

ZIMMER, ANNE and ZIMMER, FRED. *Literacy in Communication: Designing for Development.* Teheran: The International Institute for Adult Literary Methods, 1978, pp. 144.

Here are two more books in that valuable series of Training Monographs entitled Literacy in Development edited by H. S. Bhola. I particularly liked the first one for its basic assumptions (Ch. I)

- that adults already know a great deal about science,
- that science education should help them to communicate about science,
- that it should develop understanding of basic ideas and values regarding evidence for scientific beliefs.

I liked also the conception of literacy workers as "a bridge between those who possess specialised expertise and those in need of it", and, in Chapter II, the description of scientists as "persons who try to observe, understand, predict and control the things around them". I hoped that the rest of the book would help literacy workers to help learners to become scientists in this sense. What I found in the next four chapters was a beautifully written synopsis in 65 pages of four vast subjects: the Environment, Health, Agriculture and Energy. A little reminiscent of a formal text book, it might, I feared, encourage the literacy worker to "teach" science as "knowledge". I imagined him repeating to a group of hard-bitten farmers "Insects can damage or destroy crops"; "All food products should be stored in tight containers". Could this have been avoided? Perhaps – by relegating the information to appendices, or providing questions for exploration rather than facts for teaching, and expanding the "suggested teaching activities" now tucked away at the end of each section in italics. This would have given continuity with the excellent but all too short Chapter VII: "Some ideas on teaching science in non-formal settings", and the two well-chosen case studies from Iran and India which conclude this very useful and attractively written book.

The second manual is another valuable addition to the series – vital reading for professional media producers, literacy workers who produce their own visual aids and those who commission or control the production of educational media in developing countries. It is a thought-provoking mixture of communication theory and practical advice, with plenty of appropriate illustrations and a useful short Bibliography. Yet I confess that not all the

thoughts it provoked for me were positive. Human communication is intrinsically complex and confusing and at times I found this confusion somewhat confounded. At the start I mistrusted the stretched analogies between literacy and pictorial communication, implicit in the title, the first sentence and later sections on visual syntax based on Morris's Theory of Signs. There seems to me a world of difference between the use of written language, with its intrinsically meaningless signs, and the processes of pictorial representation. I would also have liked a clearer distinction between the presentation of objects and events – by body language, clothes, demonstrations etc. – and their re-presentation in pictures, with all its problems of inevitable distortion. Most of all, I disliked the blanket use of the term "message". On page 55 we read how the concept of "visualisation" "helps us to separate the idea we are trying to communicate from the form that will carry it". This distinction is so vital that it seems to me important to have a distinctive term for the ideas we are trying to communicate and the word "message" suits this purpose; but then I find a flow chart on page 85 in which "The Message" includes "Medium", "Treatment", "Distribution" and six other items. More misleading still is the recurring theme that designers and literacy workers "make messages". In development projects, most "messages", in my sense, are "made" by research workers, civil servants in technical services, planners and administrators. So I would have liked more discussion of the delicate question: who decides what to say and who decides how to say it? To borrow a phrase from our other book the media designer is "a bridge between those who possess specialised expertise and those in need of it". Another confusion I felt was between "realism" and "quality" in pictorial representation (p. 57). A competent illustrator can choose whether to make his representation of "reality" more – or less – realistic. This is not to be confused with the unintended "fuzziness" of unskilled draughtsmanship, poor photography or bad reproduction.

A recurring theme in the Manual is for "culture-oriented visual materials" and the encouragement of developing country designers to turn to their own cultures for inspiration. My heart warmed to this theme, yet I recalled having given the same encouragement to "artists" in a workshop in India, only to be rebuffed by responses from the villagers: "why do you draw pictures like this? This is how we draw, can't you draw better than that?". The problems of pictorial communication are complex and fascinating and still in need of research. I know there is another Manual in the series on Evaluation but I still wish this one had given more than two pages (the last two!) to Evaluation and Feedback – the best recipe I know for deconfusing communication.

I quite believe the authors' statement that "writing and illustrating this book has been hard work"; its users will certainly find it worth the effort.

JOHN BOWERS
University of Reading, Reading, U.K.

prospects

quarterly review of education

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Unesco

China's Schools in Flux

REPORT BY THE STATE EDUCATION LEADERS DELEGATION, NATIONAL COMMITTEE ON UNITED STATES-CHINA RELATIONS

Ronald N. Montaperto and Jay Henderson, *Editors*
Ralph W. Tyler, William A. Delano, Gregory R. Anrig, Adrienne Y. Bailey, Grace C. Baisinger, Mary F. Berry, Marlin L. Brockette, Frank B. Brouillet, Calvin M. Frazier, Virgina Macy, Wilson Riles, Thomas C. Schmidt, Louis R. Smerling, Lillian Weber, Donald Ferguson.

"*China Schools in Flux* treats the world's largest educational system in the early phase of transition from the politicized egalitarianism of the Cultural Revolution to the intellectualistic meritocratic orientation of the Four Modernizations. The authors, eminent educational administrators and scholars, demonstrate how much can be gleaned from a 16-day study tour of the People's Republic. Combining astute observation and insightful analysis, they move deftly from concrete experience to measured generalization. In so doing, they not only impart a wealth of information on how the Chinese educational system works but also shed light on how an American delegation goes about unearthing such information. Ronald N. Montaperto's essay, "China's Education in Perspective," is, perhaps, the best available brief introduction to China's educational policies since 1949. The volume is essential reading for those who seek to understand the underlying principles and important problems of Chinese education today. It is particularly recommended as background reading for those planning visits to the schools and other institutions of the People's Republic of China."

—*John Israel, University of Virginia*

This timely and informative view of China's educational system includes chapters on organization and structure, decision making, curriculum, admissions, work and study, early childhood education, family and community involvement, and relevance to American educational problems.

200 pages $18.50

M. E. Sharpe, Inc. 901 N. BROADWAY, WHITE PLAINS, N.Y. 10603

NOTES ON CONTRIBUTORS – DIE AUTOREN
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FORTHCOMING ISSUE - XXVI/1980/2

Special Number

PROBLEMS OF TEACHING MORAL VALUES IN A CHANGING SOCIETY

This issue has been prepared by two guest-editors - Jeremy J. Greenland and Kenneth G. Robinson of the Unesco Institute for Education at Hamburg. It contains contributions by *J.J. Greenland and K.G.Robinson, G.E. Pugh, J. Ardoino, P. McPhail, O. Nduka, S. Gopinathan, A. Suffert and G. Meyer, H. Srivastava, Lian Jian-sheng, G. Lein* and *R. Schmitt.*

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N O T I C E

William Conroy, the author of *The Transition to Work Simulator*, IRE XXV/1979/1, pp. 85-90 wishes to clarify his article as follows: The passage beginning at the eighth line from the bottom on p. 86 should read:

"If we want to adjust the probabilities (or experiment with a policy) so that all females must attend a Vocational Program in secondary school, we would adjust the weights for the predictor Female on this table. If we decide to initiate a policy for nonwhite females who live in large cities in regard to high school program choice, we would have to add a predictor called Female, Large City and Nonwhite. The simple rule is that each target group for a policy requires a unique predictor".

The 'Decision Table' (Figure 1) should therefore include an additional column headed 'Female, Large City, Nonwhite'.

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Un guide pour les auteurs est mis à la disposition par la salle de rédaction, dont l'adresse se trouve ci-dessus et où doivent être envoyés tous les manuscrits et toute la correspondance.

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